BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

MAIL (OR FAX) TO: ENVIR

ENVIRONMENTAL SERVICES

Industrial Source Control Division

6543 N. Burlington Ave. Portland, OR 97204-5452

FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

KINDER MORGAN BULK TERMINALS, INC.

TERMINAL 5

15550 N. LOMBARD

ACCOUNT NUMBER 0770102504

OV NUMBER 33897

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

06/01/08

MAIN GATE (Gallons)

3 2 0 2 9 1 6

SIGNATURE:

JACK WALLER, TERMINAL MANAGER

MONTHLY BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

TO:

Wackenhut Security

FROM:

Kinder Morgan Bulk Terminals, Inc. - Terminal 5

INSTRUCTIONS:

This document is to be completed PROMPTLY at 8:00 a.m.

on the first day of each month!

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

MAIN GATE (Gallons)

06-01-08

3202916

WATER DISCHARGE REPORT

Volumes and readings are in Gallons.

Date	Meter	Effluent
	Reading	Discharge
1-May	3,124,407	transfer was a second
2-May	3,126,700	2,293
3-May	3,128,973	2,273
4-May	3,131,261	2,288
5-May	3,134,714	3,453
6-May	3,138,195	3,481
7-May	3,141,677	3,482
8-May	3,143,968	2,291
9-May	3,147,449	3,481
10-May	3,149,750	2,301
11-May	3,152,046	2,296
12-May	3,154,349	2,303
13-May	3,156,661	2,312
14-May	3,158,981	2,320
15-May	3,161,270	2,289
16-May	3,163,558	2,288
17-May	3,165,827	2,269
18-May	3,168,132	2,305
19-May	3,170,441	2,309
20-May	3,172,768	2,327
21-May	3,175,108	2,340
22-May	3,177,428	2,320
23-May	3,179,749	2,321
24-May	3,182,083	2,334
25-May	3,184,394	2,311
26-May	3,186,714	2,320
27-May	3,189,026	2,312
28-May	3,193,716	4,690
29-May	3,196,058	2,342
30-May	3,198,328	2,270
31-May	3,200,599	2,271
1-Jun	3,202,916	2,317

78,509 Gallons Discharged

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FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

EPORT SHEET

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

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Industrial Source Control Division

6543 N. Burlington Ave. Portland, OR 97204-5452

FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

KINDER MORGAN BULK TERMINALS, INC. TERMINAL 5 15550 N. LOMBARD ACCOUNT NUMBER 0770102504 OV NUMBER 33897

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

05/01/08

MAIN GATE (Gallons)

3 1 2 4 4 0 7

Tene Eller

SIGNATURE:

GENE ELLIS, TERMINAL MANAGER

MONTHLY BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

TO:

Wackenhut Security

FROM:

Kinder Morgan Bulk Terminals, Inc. - Terminal 5

INSTRUCTIONS:

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on the first day of each month!

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

MAIN GATE (Gallons)

05-01-08

3124407

WATER DISCHARGE REPORT

Volumes and readings are in Gallons.

Rea 1-Apr 3,056 2-Apr 3,056 3-Apr 3,056 4-Apr 3,056 5-Apr 3,066 7-Apr 3,066 8-Apr 3,076 9-Apr 3,076	eter ding 0,338 2,624 4,923 7,225 9,515 3,036 6,570 0,254 3,687 5,994 8,303 0,610	2,286 2,299 2,302 2,290 3,521 3,534 3,684 3,433 2,307 2,309
1-Apr 3,050 2-Apr 3,050 3-Apr 3,050 4-Apr 3,050 5-Apr 3,060 6-Apr 3,060 7-Apr 3,060 8-Apr 3,070 9-Apr 3,070	0,338 2,624 4,923 7,225 9,515 3,036 6,570 0,254 3,687 5,994 8,303	2,286 2,299 2,302 2,290 3,521 3,534 3,684 3,433 2,307
2-Apr 3,052 3-Apr 3,052 4-Apr 3,053 5-Apr 3,063 6-Apr 3,063 7-Apr 3,066 8-Apr 3,070 9-Apr 3,070	2,624 4,923 7,225 9,515 3,036 6,570 0,254 3,687 5,994 8,303	2,286 2,299 2,302 2,290 3,521 3,534 3,684 3,433 2,307
3-Apr 3,05-4 4-Apr 3,05-5 5-Apr 3,05-6 6-Apr 3,06-6 7-Apr 3,06-6 8-Apr 3,07-6 9-Apr 3,07-6	4,923 7,225 9,515 3,036 6,570 0,254 3,687 5,994 8,303	2,299 2,302 2,290 3,521 3,534 3,684 3,433 2,307
4-Apr 3,05 5-Apr 3,05 6-Apr 3,06 7-Apr 3,06 8-Apr 3,07 9-Apr 3,07	7,225 9,515 3,036 6,570 0,254 3,687 5,994 8,303	2,302 2,290 3,521 3,534 3,684 3,433 2,307
5-Apr 3,059 6-Apr 3,069 7-Apr 3,069 8-Apr 3,079 9-Apr 3,079	9,515 3,036 6,570 0,254 3,687 5,994 8,303	2,290 3,521 3,534 3,684 3,433 2,307
6-Apr 3,060 7-Apr 3,060 8-Apr 3,070 9-Apr 3,070	3,036 6,570 0,254 3,687 5,994 8,303	3,521 3,534 3,684 3,433 2,307
7-Apr 3,060 8-Apr 3,070 9-Apr 3,073	6,570 0,254 3,687 5,994 8,303	3,534 3,684 3,433 2,307
8-Apr 3,070 9-Apr 3,070	0,254 3,687 5,994 3,303	3,684 3,433 2,307
9-Apr 3,073	3,687 5,994 3,303	3,433 2,307
	5,994 8,303	2,307
10 4 2 07/	3,303	
10-Apr 3,075		2.309
11-Apr 3,078	0.610	
12-Apr 3,080	-,	2,307
13-Apr 3,084	4,087	3,477
14-Apr 3,087	7,556	3,469
15-Apr 3,087	7,556	0
16-Apr 3,089	9,885	2,329
17-Apr 3,092	2,204	2,319
18-Apr 3,094	4,515	2,311
19-Apr 3,096	5,818	2,303
20-Apr 3,099	9,138	2,320
21-Apr 3,10°	1,460	2,322
22-Apr 3,100	3,754	2,294
23-Apr 3,100	6,064	2,310
	3,375	2,311
	0,680	2,305
	2,973	2,293
	5,259	2,286
	7,540	2,281
	9,821	2,281
	2,105	2,284
	4,407	2,302

74,069 Gallons Discharged

Permit Manager FAX NUMBER 503-823-5559 503-823-5556

EPORT SHEET

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

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BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

MAIL (OR FAX) TO:

ENVIRONMENTAL SERVICES

Industrial Source Control Division

6543 N. Burlington Ave. Portland, OR 97204-5452

FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

KINDER MORGAN BULK TERMINALS, INC. TERMINAL 5 15550 N. LOMBARD ACCOUNT NUMBER 0770102504 OV NUMBER 33897

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

DISCHARGE FLOW METER

POLYSONICS DCT 1088 MAIN GATE (Gallons)

DATE READ

04/01/08

3 0 5 0 3 3 8

SIGNATURE:

GENE ELLIS, TERMINAL MANAGER

MONTHLY BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

TO:

Wackenhut Security

FROM:

Kinder Morgan Bulk Terminals, Inc. - Terminal 5

INSTRUCTIONS:

This document is to be completed PROMPTLY at 8:00 a.m.

on the first day of each month!

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

MAIN GATE (Gallons)

04-01-08

3050338

BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT MONTHLY RECAP - PBT5

ROUTE TO: VP Regional Manager; Regional EHS Manager, Terminal Manager, Assistant Terminal Manager

YEAR: 2008

<u>MONTH</u>	DISCHARGE FLOW METER POLYSONICS DCT 1088 FIRST OF THE MONTH	DISCHARGE FLOW METER POLYSONICS DCT 1088 GALLONS FOR THE MONTH OF:
January	2799442	90976
February	2890418	80812
March	2971230	79108
April	3050338	
Мау		0
June		0
July		0
August		0
September		0
October		0
November		0
December		0
January		

WATER DISCHARGE REPORT

Volumes and readings are in Gallons.

Date	Meter	Effluent
	Reading	Discharge
1-Mar	2,971,230	
2-Mar	2,973,535	2,305
3-Mar	2,975,833	2,298
4-Mar	2,978,149	2,316
5-Mar	2,980,440	2,291
6-Mar	2,982,738	2,298
7-Mar	2,985,080	2,342
8-Mar	2,987,414	2,334
9-Mar	2,989,713	2,299
10-Mar	2,992,003	2,290
11-Mar	2,994,319	2,316
12-Mar	2,996,613	2,294
13-Mar	3,000,108	3,495
14-Mar	3,003,628	3,520
15-Mar	3,007,177	3,549
16-Mar	3,010,725_	3,548
17-Mar	3,014,323	3,598
18-Mar	3,017,913_	3,590
19-Mar	3,020,251	2,338
20-Mar	3,022,567	2,316
21-Mar	3,024,884	2,317
22-Mar	3,027,231	2,347
23-Mar	3,029,534	2,303
24-Mar	3,031,869	2,335
25-Mar	3,034,189	2,320
26-Mar	3,036,522	2,333
27-Mar	3,038,873	2,351
28-Mar	3,041,158	2,285
29-Mar	3,043,453	2,295
30-Mar	3,045,750	2,297
31-Mar	3,048,050	2,300
1-Apr	3,050,338	2,288

79,108 Gallons Discharged

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> MAIN GATE (Gallons) **POLYSONICS DCT 1088**

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0 СT 0 ယ ယ œ **DISCHARGE FLOW METER**

KINDER MORGAN BULK TERMINALS, INC. TERMINAL 5 15550 N. LOMBARD Portland, OR 97204-5452 6543 N. Burlington Ave. MAIL (OR FAX) TO:

ENVIRONMENTAL SERVICES

Industrial Source Control Division

BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPO

READI ON O

OV NUMBER 33897

ACCOUNT NUMBER 0770102504

SIGNATURE:

GENE ELLIS, TERMINAL MANAGER

→ BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

MAIL (OR FAX) TO:

ENVIRONMENTAL SERVICES

Industrial Source Control Division

6543 N. Burlington Ave. Portland, OR 97204-5452

FAX NUMBER 503-823-5559 **Permit Manager** 503-823-5556

KINDER MORGAN BULK TERMINALS, INC. TERMINAL 5 15550 N. LOMBARD

ACCOUNT NUMBER 0770102504

OV NUMBER 33897

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH **BILLING MONTH**

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

03/01/08

MAIN GATE (Gallons) 2 9 7 1 2 3 0

SIGNATURE:

GENE ELLIS, TERMINAL MANAGER

MONTHLY BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

TO:

Wackenhut Security

FROM:

Kinder Morgan Bulk Terminals, Inc. - Terminal 5

INSTRUCTIONS:

This document is to be completed PROMPTLY at 8:00 a.m.

on the first day of each month!

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

MAIN GATE (Gallons)

03-01-08 2971230

WATER DISCHARGE REPORT

Volumes and readings are in Gallons.

Date	Meter	Effluent
	Reading	Discharge
1-Feb	2,890,418	
2-Feb	2,893,899	3,481
3-Feb	2,899,989	6,090
4-Feb	2,902,288	2,299
5-Feb	2,904,618	2,330
6-Feb	2,906,939	2,321
7-Feb	2,909,253	2,314
8-Feb	2,912,747	3,494
9-Feb	2,916,238	3,491
10-Feb	2,919,744	3,506
11-Feb	2,922,058	2,314
12-Feb	2,925,582	3,524
13-Feb	2,929,133	3,551
14-Feb	2,932,694	3,561
15-Feb	2,936,248	3,554
16-Feb	2,938,764	2,516
17-Feb	2,941,071	2,307
18-Feb	2,943,379	2,308
19-Feb	2,945,660	2,281
20-Feb	2,947,955	2,295
21-Feb	2,950,261	2,306
22-Feb	2,952,567	2,306
23-Feb	2,954,910	2,343
24-Feb	2,957,220	2,310
25-Feb	2,959,589	2,369
26-Feb	2,961,942	2,353
27-Feb	2,964,333	2,391
28-Feb	2,966,632	2,299
29-Feb	2,968,931	2,299
1-Mar	2,971,230	2,299

80,812

Gallons Discharged

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FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

EPORT SHEET

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

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Industrial Source Control Division

6543 N. Burlington Ave. Portland, OR 97204-5452

FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

KINDER MORGAN BULK TERMINALS, INC. TERMINAL 5 15550 N. LOMBARD

ACCOUNT NUMBER 0770102504

OV NUMBER 33897

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

02/01/08

MAIN GATE (Gallons)

2 8 9 0 4 1 8

SIGNATURE:

GENE ELLIS, TERMINAL MANAGER

JANUARY WATER DISCHARGE REPORT

Volumes and readings are in Gallons.

Date	Meter	Effluent
	Reading	Discharge
1-Jan	2,799,442	
2-Jan	2,802,980	3,538
3-Jan	2,806,557	3,577
4-Jan	2,808,895	2,338
5-Jan	2,812,356	3,461
6-Jan	2,814,860	2,504
7-Jan	2,818,361	3,501
8-Jan	2,821,819	3,458
9-Jan	2,825,321	3,502
10-Jan	2,828,781	3,460
11-Jan	2,831,062	2,281
12-Jan	2,834,535	3,473
13-Jan	2,840,545	6,010
14-Jan	2,844,046	3,501
15-Jan	2,847,558	3,512
16-Jan	2,849,873	2,315
17-Jan	2,852,194	2,321
18-Jan	2,854,543	2,349
19-Jan	2,856,883	2,340
20-Jan	2,859,198	2,315
21-Jan	2,861,513	2,315
22-Jan	2,863,813	2,300
23-Jan	2,866,147	2,334
24-Jan	2,869,662	3,515
25-Jan	2,873,188	3,526
26-Jan	2,876,528	3,340
27-Jan	2,878,892	2,364
28-Jan	2,881,221	2,329
29-Jan	2,883,532	2,311
30-Jan	2,885,832	2,300
31-Jan	2,888,128	2,296
1-Feb	2,890,418	2,290

90,976 Gallons Discharged

MONTHLY BUREAU OF ENVIRONMENTAL SERVICES SUB-METER REPORT SHEET

TO:

Wackenhut Security

FROM:

Kinder Morgan Bulk Terminals, Inc. - Terminal 5

INSTRUCTIONS:

This document is to be completed PROMPTLY at 8:00 a.m.

on the first day of each month!

DISCHARGE FLOW METER

POLYSONICS DCT 1088

DATE READ

MAIN GATE (Gallons)

02-01-08 2890418

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FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

PEPORT SHEET

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ON OR BEFORE THE 13TH OF EACH
BILLING MONTH

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Industrial Source Control Division

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KINDER MORGAN BULK TERMINALS, INC.

TERMINAL 5

15550 N. LOMBARD

ACCOUNT NUMBER 0770102504

OV NUMBER 33897

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POLYSONICS DCT 1088

DATE READ

01/01/08

MAIN GATE (Gallons)

7 9 9 4 4 2

SIGNATURE:

GENE ELLIS, TERMINAL MANAGER

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POLYSONICS DCT 1088

DATE READ

MAIN GATE (Gallons)

01-01-08

2799442

WATER DISCHARGE REPORT

Volumes and readings are in Gallons.

Date	Meter	Effluent
	Reading	Discharge
1-Dec	2,650,040	"" ""("")""
2-Dec	2,652,374	2,334
3-Dec	2,683,967	31,593
4-Dec	2,704,159	20,192
5-Dec	2,706,477	2,318
6-Dec	2,708,772	2,295
7-Dec	2,712,282	3,510
8-Dec	2,715,780	3,498
9-Dec	2,719,245	3,465
10-Dec	2,722,765	3,520
11-Dec	2,726,252	3,487
12-Dec	2,729,782	3,530
13-Dec	2,733,285	3,503
14-Dec	2,735,606	2,321
15-Dec	2,737,886	2,280
16-Dec	2,740,182	2,296
17-Dec	2,742,489	2,307
18-Dec	2,744,780	2,291
19-Dec	2,747,090	2,310
20-Dec	2,749,352	2,262
21-Dec	2,752,847	3,495
22-Dec	2,756,458	3,611
23-Dec	2,756,458	0
24-Dec	2,773,028	16,570
25-Dec	2,775,249	2,221
26-Dec	2,777,590	2,341
27-Dec	2,783,440	5,850
28-Dec	2,785,793	2,353
29-Dec	2,788,976	3,183
30-Dec	2,792,467	3,491
31-Dec	2,795,978	3,511
1-Jan	2,799,442	3,464

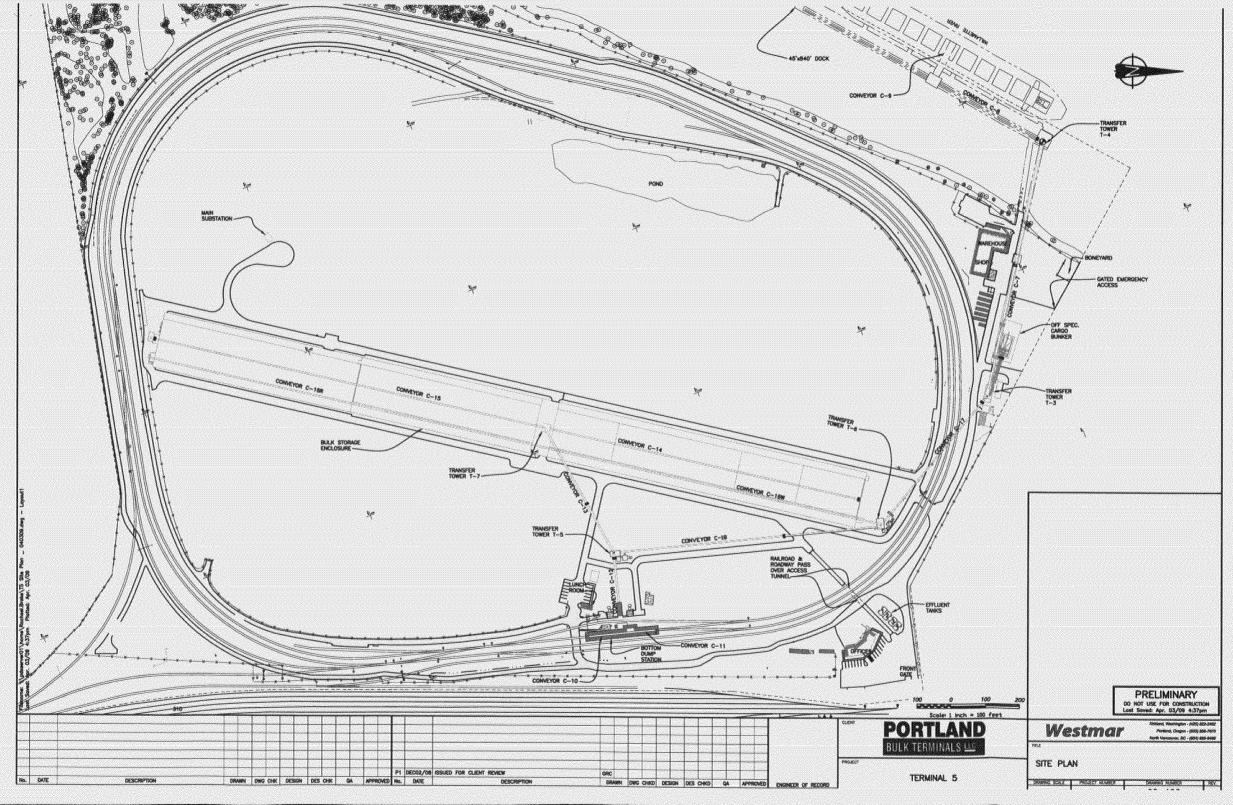
149,402 Gallons Discharged

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FAX NUMBER 503-823-5559 Permit Manager 503-823-5556

REPORT SHEET

READINGS ARE DUE IN OUR OFFICE ON OR BEFORE THE 13TH OF EACH BILLING MONTH





3556 NW Front Avenue Suite 360 Portland Oregon 97210 503/248-0848 tel 503/222-3070 fax www.ssamarine.com

> Portland Bulk Terminal, L.L.C. Terminal 5 15550 N. Lombard Street Portland, OR 97203 (503)-285-4200

REVISED FACE PAGE- STORM WATER POLLUTION CONTOL PLAN

Prepared in Accordance with General Permit No. 1200Z issued by the Oregon

Department of Environmental Quality

Paul Huculak General Manager SSA Pacific, Inc., Portland, OR.

Primary Facility Contacts: Jack Waller, T-5 Manager

(503)-285-4200, Ext 40

Dustin Wilson, T-5 Assistant Manager

(503)-285-4200, Ext 12

Paul Huculak, SSA Pacific Gen. Mgr.

(503)-248-0848

Revision dated May 17, 2011 for Transfer of NPDES Permit from Kinder Morgan Bulk Terminals to SSA Pacific, Inc., on June 1, 2011



Kinder Morgan Bulk Terminals, Inc. Portland Bulk Terminals, L.L.C. Terminal 5 15550 N. Lombard Street Portland, OR 97203 (503) 285-4200

STORM WATER POLLUTION CONTROL PLAN

Prepared in Accordance with General Permit No. 1200 Z issued by the Oregon Department of Environmental Quality

April 2008.

Vice President (West Region

Primary Facility Contacts:

Jack Waller, Terminal Manager

503-285-4200, Ext. #40

Neil Maunu, Asst. Terminal Manager

503-285-4200 Ext. #17

Brent McMullin, West Region EHS Manager

360-693-5300, Extension #11



Kinder Morgan Bulk Terminals, Inc.
Portland Bulk Terminals, L.L.C.
Terminal 5
15550 N. Lombard Street
Portland, OR 97203
(503) 285-4200

STORM WATER POLLUTION CONTROL PLAN

Prepared in Accordance with General Permit No. 1200Z issued by the Oregon Department of Environmental Quality

Vice President - West Region

Primary Facility Contacts:

Jack Waller, T-5 Manager
503-285-4200, Extension #40
Dustin Wilson, T-5 Assistant Manager
503-285-4200, Extension #12
Brent McMullin, West Region EHS Manager
360-693-5300 Extension #11

Revision History

10/04/04 Revised title page to include facility contact names and phone numbers as

requested by BES letter dated 9-30-04. (Filed under SW Facility Inspections)

11/25/08. Revised Primary Facility Contacts.

4/3/09. Revised. Updated fuel tank information. Updated site maps. Information updated

for site safety orientation to new ILWU gearlocker.

2/18/10 Revised Primary Facility Contacts.

Issue Date: 05/03 Page 1 of 10

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1.0 Storm Water Pollution Control Plan Preparation & Implementation

2.0 Site Description

- 2.1 Industrial Activities
- 2.2 General Location Map
- 2.3 Site Map and Site Drainage Map
- 2.4 Impervious Areas
- 2.5 Potential Pollutants
- 2.6 Receiving Waters
- 2.7 Description of Storm Water Discharges

3.0 Controls

- 3.1 Existing Storm Water Best Management Practices
 - 3.1.1 Containment
 - 3.1.2 Oil and Grease
 - 3.1.3 Waste Chemicals and Material Disposal
 - 3.1.4 Erosion and Sediment Control
 - 3.1.5 Debris Control
 - 3.1.6 Storm Water Diversion
 - 3.1.7 Covered Activities
 - 3.1.8 Housekeeping
- 3.2 Spill Prevention and Response Procedures
- 3.3 Preventative Maintenance
- 3.4 Employee Education

4.0 Recordkeeping and Internal Reporting Procedures

APPENDICES

Appendix I Storm Water Quality Control Operation & Maintenance Plan

Appendix II SWPCP Revisions

LIST OF FIGURES

Figure 1 Site Location Map

Figure 2 Site Map

Figure 3 Site Drainage Map

Issue Date: 05/03 Page 2 of 10

STORM WATER POLLUTION CONTROL PLAN

1.0 STORM WATER POLLUTION CONTROL PLAN PREPARATION & IMPLEMENTATION

The Storm Water Pollution Control Plan for the Terminal 5 Facility of Kinder Morgan Bulk Terminals, Inc. is intended to meet the requirements for such a plan as specified in General Permit #1200Z issued by the Oregon Department of Environmental Quality (DEQ). The plan has been prepared by a person knowledgeable in storm water management and familiar with the facility namely, the Regional Environmental, Health & Safety Manager. The Plan has been signed in accordance with 40 CFR 12.22 by the Vice President Regional Manager. The plan shall be kept current and updated as necessary to reflect any changes in facility operations.

The Plan shall be submitted to DEQ in accordance with Schedule B.3. in the General Permit. A copy shall be maintained at the facility and made available upon request to DEQ or other government agencies responsible for storm water management pursuant to Oregon State regulations.

2.0 SITE DESCRIPTION

2.1 INDUSTRIAL ACTIVITIES

KMBT Terminal 5 is a marine cargo-handling facility, SIC Code 4491. Only dry bulk cargo products are handled, primarily "potash" and, occasionally, other fertilizers and non-hazardous materials. A plan view map of the facility showing the locations of the bulk material warehouse; ship loading dock; overhead conveyors; conveyor transfer towers; railroad tracks; storm water retention pond; maintenance shop; lunchroom; offices and parking lots is provided in Figure 2.

Bulk quantities of outbound dry material are transferred from railcars directly to cargo ships or, alternatively, into the storage building where it is later reclaimed and transferred to cargo ships.

Railcars containing bulk quantities of outbound material enter the facility on rail from the southeast side as identified on the Site Map (see Figure 2). Railcars enter the structure identified as the Rail Pit and discharge their contents into a pit located beneath the tracks. An enclosed conveyor transports the material from the pit directly to the top of Transfer Station T-5 located south of the bulk storage warehouse. From this point, the material is either sent directly to Transfer Station T-6 (then to two other conveyor stations and on to an outbound ship), or to Transfer Station T-7 which is used to load bulk solids to the storage warehouse.

Discharge of airborne emissions generated by the material-handling system at KMBT Terminal 5 are permitted under Air Contaminant Discharge Permit Number 26-3071 issued by DEQ. KMBT operates and maintains a modern, computer-controlled conveyor with baghouse filters and cyclones to limit airborne particulate matter discharges. Accordingly, the potential for airborne products to

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enter storm water discharges is minimized. Potash recovered from baghouses is bagged and recycled.

Spills of solid materials occurring during the handling of materials on the leased parcels are swept up with a vacuum truck.

Sanitary waste water, and the majority of process wash water, is discharged directly to the sewer. Sewer discharges, regulated by the City of Portland, are monitored by KMBT and the City's Bureau of Environmental Services pursuant to Permit Number 400.132. This permit, issued by the City of Portland to KMBT Terminal 5, allows discharge of sanitary and process wash water to the sewer. Potash recovered during cleaning operations is placed in dumpsters; kept in areas that drain to the sewer effluent tanks; and disposed of to a landfill.

A list of bulk materials handled by KMBT Terminal 5 is presented in Section 2.5 of this SWPCP.

Maintenance of vehicles is generally done off-site; however, maintenance on the three terminal locomotives is done on site.

2.2 GENERAL LOCATION MAP

The street address of the subject property is 15550 North Lombard; Terminal 5; Portland, Oregon 97203. The subject property is in Section 23; Township 2 North; Range 1 West of the Willamette Meridian; and is located on the east bank of the Willamette River near Kelly Point Park in the Rivergate Industrial area; and is approximately 1.5 miles south of the confluence of the Willamette and Columbia Rivers. The 57-acre subject property is located between ALCATEL Submarine Systems, Inc. and Oregon Steel Mills at Terminal 5. A Site Location Map is presented as Figure 1.

2.3 SITE MAP AND SITE DRAINAGE MAP

A Site Map, Figure 2, illustrates the location of site facilities. A Site Drainage Map, Figure 3, illustrates directional storm water runoff patterns, ditches, and retention pond.

2.4 IMPERVIOUS AREAS

Impervious surfaces include all paved surfaces and roofed areas. Impervious surface areas account for less than 10 percent of the subject property surface area and are shown in Figure 3.

2.5 POTENTIAL POLLUTANTS

KMBT Terminal 5 receives and ships bulk quantities of cargo materials. The principal material handled by KMBT Terminal 5 is potash; however, other products may be handled including other fertilizers and soda ash. In addition,

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KMBT maintains various quantities of petroleum-based lubricants, solvents, paint, and fuel products such as gasoline, propane, and diesel on site.

The introduction of the above materials into storm water runoff may result in changes to pH levels and an increase in levels of oil and grease, ammonia, suspended solids, and total dissolved solids.

Benchmark values of storm water effluent pollutants are noted in the General Permit 1200Z.

A list of bulk materials currently handled (and anticipated to be handled) is provided below:

Non-hazardous materials (not listed in 40 CFR 302.4):

- Fertilizers (bulk)
 - o Potash
 - o Related fertilizers
 - o Other Fertilizers
- Soda Ash

2.6 RECEIVING WATERS

Storm water from KMBT Terminal 5 discharges from a series of ditches, a retention pond and culverts directly into the Willamette River (see Figure 3). All of the above flows through the sampling point that is located behind (south) of the maintenance building and accessed through a manhole cover.

2.7 DESCRIPTION OF STORM WATER DISCHARGES

Most of the storm water from the 57-acre site flows to a retention pond and then to an outfall (Outfall 001) near the dock area. Outfall 001 receives storm water runoff collected by a series of ditches and the retention pond shown in Figure 3. The ditches and the retention pond are segregated from the maintenance shop; the interior of the bulk storage warehouse; and the covered conveyors. Storm water is unlikely to be significantly impacted by industrial activities performed by KMBT.

Storm water samples are required semi-annually. In the event that any of the General Permit 1200Z benchmarks are not achieved, KMBT will investigate the source of the elevated pollutant levels and review, if necessary, the SWPCP within 60 days of receiving sampling results. The review will determine whether the SWPCP is being followed and to identify any additional technically and economically feasible site controls that need to be implemented to further improve the quality of storm water discharges.

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3.0 CONTROLS

3.1 EXISTING STORM WATER BEST MANAGEMENT PRACTICES

Existing storm water best management practices designed to minimize industrial impact on storm water discharge include:

3.1.1 CONTAINMENT

A 480-gallon above-ground gasoline fuel storage tank has a double-wall construction to prevent leakage. The tank is covered and enclosed in concrete secondary containment designed to capture 110% of the fuel tank capacity. Additionally, the tank is mounted adjacent to a concrete containment pad to capture inadvertent drips or spills from vehicle fueling operations. Liquids on the containment pad drain to an oil/water separator which discharges to the sewer. A small tank of diesel fuel is kept on a portable cart. Absorbents are maintained in the area and care is taken to immediately contain and wipe up any spills that may occur. Other hazardous substances are stored in areas that do not drain to the storm system.

3.1.2 OIL AND GREASE

Minor amounts of oil and grease from motorized vehicles occur on paved areas. Oil or grease used in the maintenance of machinery is stored in the maintenance shop and is not exposed to storm water. Any oil or grease that may spill or leak during maintenance is cleaned up before it can enter any storm water.

3.1.3 WASTE CHEMICALS AND MATERIAL DISPOSAL

Used oils are stored and recycled. All wastes are disposed of as solid waste at properly permitted disposal sites and are kept covered to prevent exposure of storm water.

3.1.4 EROSION AND SEDIMENT CONTROL

The majority of the facility has vegetation growing on it. Roads are either graveled or paved. The retention pond helps to reduce sediment in the storm water discharge. Gravel is placed on banks next to roads to decrease the amount of erosion and sediment created from rain events.

3.1.5 DEBRIS CONTROL

The retention pond and storm water ditches act to eliminate or minimize debris in storm water discharges. Blocked ditches or storm water conveyances are unblocked as needed.

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3.1.6 STORM WATER DIVERSION

Storm water from the steam cleaning pad is captured in a sump and is diverted to the sewer. Storm water from the T-4 transfer tower is captured by a sump and is diverted to the ditch system.

3.1.7 COVERED ACTIVITIES

The railcar unloading pit, conveyors, and storage building are covered to prevent exposure of storm water to products handled.

3.1.8 HOUSEKEEPING

Contamination of storm water shall be minimized by regular cleaning, sweeping and vacuuming of dock; tower sumps; and work barge surfaces.

3.2 SPILL PREVENTION AND RESPONSE PROCEDURES

Inadvertent spills and releases of solid cargo products will be cleaned up by means of sweeping and/or vacuuming. Leaks or drips of oil on docks and on work barges will be cleaned up using absorbents and then containerized as quickly as practicable. An ample supply of absorbents and cleaning equipment shall be stored in the maintenance shop at all times. Inadvertent spills and releases of cargo products directly into the river from handling equipment such as front-end loaders, clamshell buckets, shiploaders, conveyors, etc., shall be minimized to the extent practicable by (a) maintaining all equipment in accord with manufacturer's specifications and good engineering practices; and (b) frequent cleanup of accumulations of spilled cargo on or near the dock. Spill kits are available on-site and qualified spill cleanup firms such as Foss Environmental are available to respond to accidental spills. Under no conditions may any material or any waste of any kind be discharged into the river except as allowed under KMBT Terminal 5 NPDES permit. Spill response and prevention plans are discussed in KMBT Terminal 5 Accidental Spill Prevention Plan (ASPP).

3.3 PREVENTATIVE MAINTENANCE

KMBT Terminal 5 Terminal Manager is responsible for administering the maintenance and inspection programs that include:

- Daily inspections of areas where storm water could be impacted
- Monthly inspections facilities
- Maintenance activities for all product handling equipment and storm water facilities

3.4 EMPLOYEE EDUCATION

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KMBT Terminal 5 provides training and instruction for all personnel regarding the goals and content of the SWPCP. This training addresses storm water management, spill response procedures, and materials management practices.

KMBT Terminal 5 presents the above information as part of regularly scheduled health and safety meetings; education seminars; written procedures; posted materials; or combinations thereof. SWPCP information is given to all new ILWU gearlocker in conjunction with their site safety orientation. The effectiveness of this program shall be evaluated and modified as necessary as part of the KMBT Terminal 5 SWPCP annual review.

4.0 RECORD KEEPING AND INTERNAL REPORTING PROCEDURES

The SWPCP shall be maintained on file at KMBT Terminal 5 and made available to the DEQ for inspection upon request. A copy of the Storm Water Discharge Permit including the General Conditions shall be kept on file with the Plan.

KMBT Terminal 5 shall maintain records of the following events: Inspection, maintenance, repair, and educational activities. Incidents that impact or have the potential to impact storm water or surface waters.

APPENDIX I

STORM WATER QUALITY CONTROL OPERATION & MAINTENANCE PLAN

Description of Storm Water Facilities: The storm water facilities for the Kinder Morgan Bulk Terminals, Inc. Facility located at 15550 North Lombard Street in Portland, Oregon consist of the following:

- · Asphalt ditches in the vicinity of the bulk storage building
- · Unlined ditches on one side of the railroad tracks and the roadways on site
- · Culverts which transport storm water under the roadways and railroad tracks
- · A wet pond
- · A sedimentation manhole
- · An outfall to the Willamette River

Inspections: Inspections of the ditches and pond to insure that they are clear of debris or blockage will be completed on a daily basis.

Inspection of all storm water facilities will be completed twice a year with review of the following items:

- · Stabilization of wet pond embankment will be insured by checking for signs of erosion
- · Structural integrity of wet pond weir will be reviewed
- Sedimentation of wet pond will be checked by monitoring gauges at opposite ends of the wet pond

Maintenance: The storm water facilities will be maintained in the following manner:

- Erosion of the wet pond embankment will be repaired in a timely manner upon discovery and sources will be identified and controlled
- Structural deficiencies of the wet pond weir will be corrected in a timely manner upon discovery
- The wet pond will be dredged in a timely manner upon discovery of accumulation of over one foot of sediment
- · Grassy areas will be mowed at least once a year and herbicides will be used to control vegetation. NOTE: Because of shipments to Australia, Terminal 5 is subject to the rules of the Australian Quarantine Inspection Service and cannot allow vegetation to go to seed inside the terminal
- The sedimentation manhole will be cleaned out annually in a manner to minimize the amount of sediment and trapped oil entering the outlet pipe
- · Vegetation that interferes with the wet pond operation will be pruned or removed
- Excess sediment in culverts and ditches will be cleaned out as needed

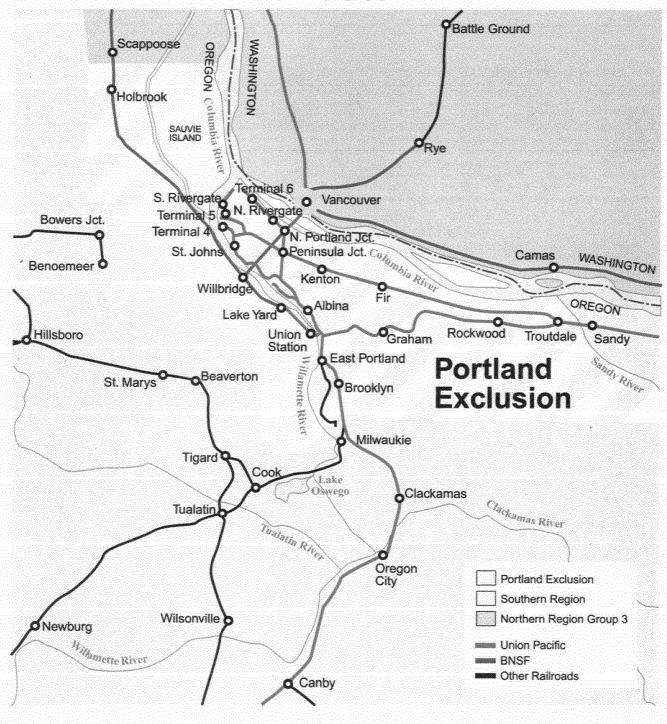
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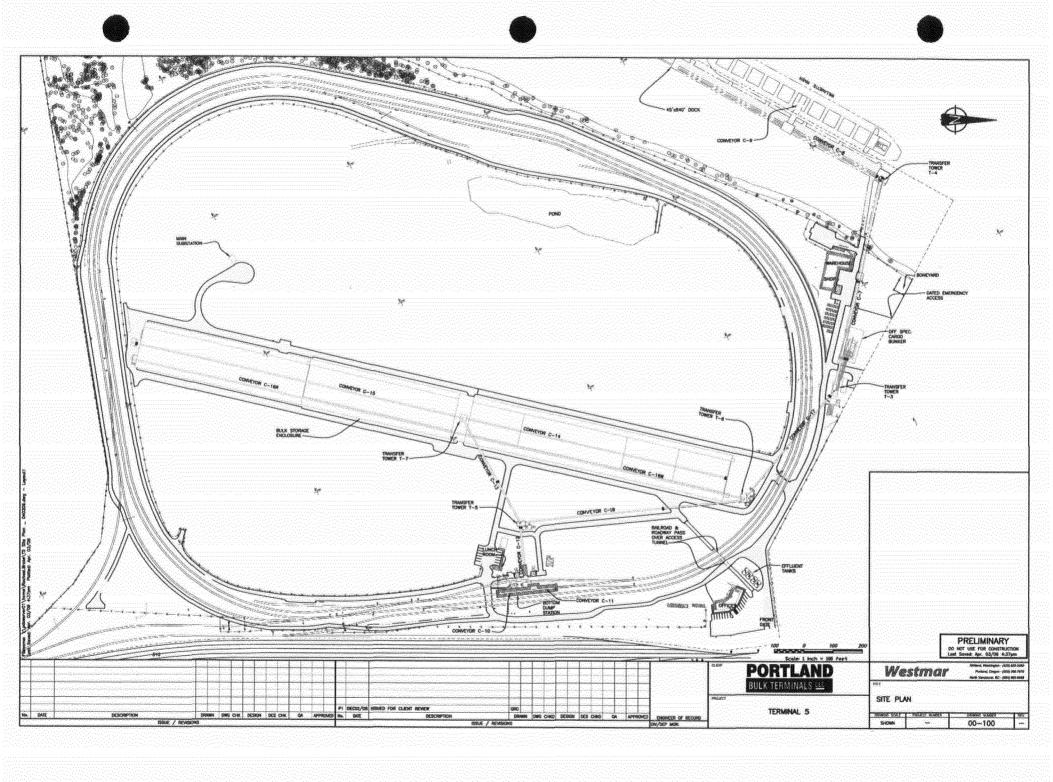
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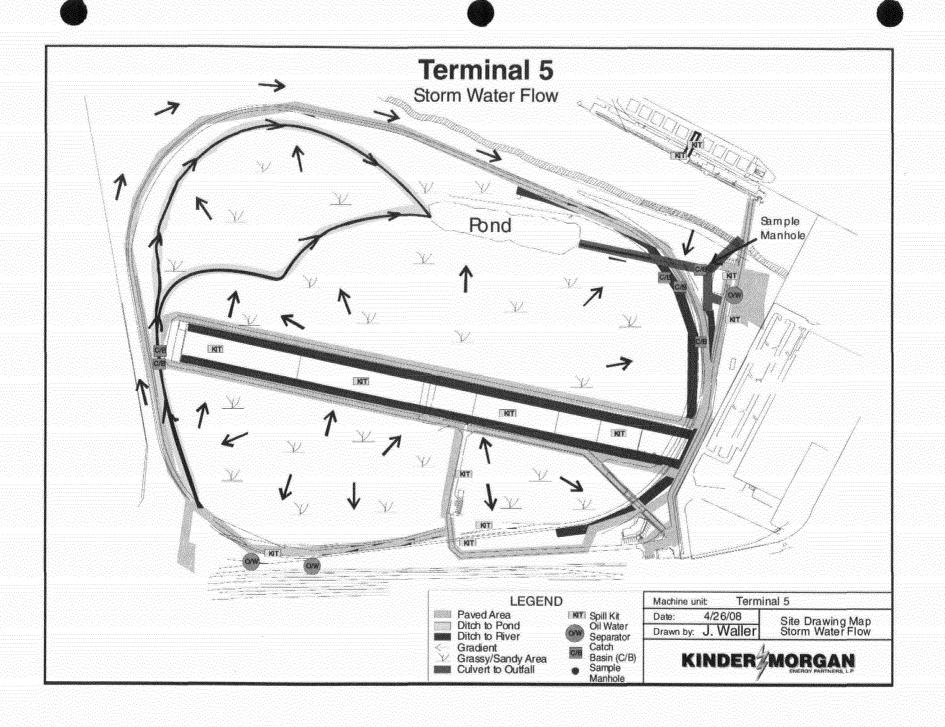
11-25-08	Revised facility contacts.
10-04-04	Revised title page to include facility contact names and phone numbers as requested by BES letter dated 9-30-04. (Filed under SW Facility Inspections)
4/3/09.	Revised. Updated fuel tank information. Updated site maps. Information updated for site safety orientation to new ILWU gearlocker.
2-18-10	Revised Primary Facility Contacts.

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Portland Area Detail







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Industrial Pretreatment Supervisor

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solids - total		M	inimum	238.00	000 mg/L	Count 1	
		A	Average	238.00	000 mg/L		
		Ma	aximum	238.00	000 mg/L		
olids - total dissolved	=	2943	lbs/day	self	composite	07/24/2008 12:30 PM	1A
olids - total dissolved	=	2226	lbs/day	self	composite	08/28/2008 9:50 AM	1A
olids - total dissolved	=	3609	lbs/day	city	composite	10/23/2008 12:00 PM	1A
olids - total dissolved	=	1440	lbs/day	self	composite	10/30/2008 12:50 PM	1A
olids - total dissolved	=	320	lbs/day	self	composite	01/22/2009 12:25 PM	1A
olids - total dissolved	=	13.45	lbs/day	self	composite	04/30/2009 11:13 AM	1A
olids - total dissolved	=	1363	lbs/day	city	composite	06/02/2009 1:07 PM	1 A
olids - total dissolved	=	8.4	lbs/day	self	composite	07/28/2009 10:45 AM	1A
olids - total dissolved	=	2014	lbs/day	city	composite	08/31/2009 12:00 PM	1 A
olids - total dissolved		M	inimum	8.40	000 lbs/day	Count 9	
			Average	1,548.5	389 lbs/day		
		Ma	aximum		000 lbs/day		
olids - total dissolved @180C	. =	79500	mg/L	city	composite	07/31/2008 12:00 PM	1A
olids - total dissolved @180C	=	76100	-	city	composite	10/23/2008 12:00 PM	1A
olids - total dissolved @180C	=	43000	-	city	composite	02/26/2009 12:00 PM	1A
olids - total dissolved @180C	=	32200	mg/L	city	composite	06/02/2009 1:07 PM	1A
olids - total dissolved @180C	=	64800	mg/L	city	composite	08/31/2009 12:00 PM	1A
olids - total dissolved @180C		М	inimum	32,200.0	000 mg/L	Count 5	
_		,	Average	59,120.0	000 mg/L		
		Ma	aximum	79,500.00	000 mg/L		
nc	=	0.47	mg/L	self	composite	07/24/2008 12:30 PM	1A
inc	=	4.49	mg/L	city	composite	07/31/2008 12:00 PM	1A
inc	=	1.56	mg/L	self	composite	08/28/2008 9:50 AM	1 A
inc	=	0.912	mg/L	self	composite	10/30/2008 12:50 PM	1A
	=	0.237		self	composite	01/22/2009 12:25 PM	1A

^{***} Note - those results which have an operator of '<' are divided in half to determine minimums, maximums, and averages

Org Id **25447**

Org Name	KINDER MORGAN BULK TERM. 5 Inc	с.	Permit Number	400.132	
Analyte Name	Result Op	Numeric Analyte Result Units	Sample Tester Type	Collection Date	Location Code
zinc	=	1.9 mg/L	city composite	02/26/2009 12:00 PM	1A
zinc	=	0.75 mg/L	self composite	04/30/2009 11:13 AM	1A
zinc	=	0.0374 mg/L	self composite	07/28/2009 10:45 AM	1A
zinc	=	1.61 mg/L	city composite	08/31/2009 12:00 PM	1A
zinc		Minimum	0.0374 mg/L	Count 9	
		Average	1.3296 mg/L	`	
		Maximum	4.4900 mg/L		

^{***} Note - those results which have an operator of '<' are divided in half to determine minimums, maximums, and averages

TOG 20 mg/L Petro NP= 15 tood P= 5

INDUSTRY NAME:/ SITE ADDRESS: -{//	45550	14.	Sulk Terr	Portland,	OR 97203	
INSPECTION TYPE:	☐ Minor	Major Major	2 4		Other: Annual	T. = a
		,	_	initing 0	Omer.	CLS, L.
DESCRIBE THE PROCE						
PRETREATMENT SYST	EM: CON	DITION &	OPERATION		COMMENTS	
	•		eds improvement			び連挙を得る要は、4、300人は173
Clarifier						
Oil & Water Separator pH adjustment		D N				
						
POINT (S) OF COMPLIA	ANCE:					
LOCATION/CODE	CON		OPERATION		COMMENTS	
	ger i i mortun		eeds improvemen	**** ********************************		
	KONFOLY WARRENINGS-"	₫ . ¬				obio sale segi desi. Manggara
2	ALCONOMY AND S] 		110 CONT.		
	528 927 (279 856) <u>2.</u>	_	_	Notes of the second		Bulleting in the state of the s
RECORDS REVIEW:		OITION & O		ınce?	COMMENTS	
ASPP	≱		.∄-Yes □	LASSES, PERSONAL PROPERTY OF THE	English English	addicomokeled
□ TOMP			🗆 Yes 🗆	No		
∠ PERMIT	₫		⊠-Yes □	No 32/2	2012	
□ RECORDS	. E		∫⊑:Yes □		To Kiles	
	Æ		•	2 710	to update	
SLUDGE DISPOSAL: {A	ttach extra sh					
PROCESS	1/24	HAU	1 1 1		DESTINATIO	N (/2/
1. Dist Brigs Moder	(/utes)	(VC)	27 1	A-ine (p)	17.1154.000,	O. J. Parel
3. C/w Sludge	× / 3	West Co	ast Marin		Oil Lokefinia	<u>, , , , , , , , , , , , , , , , , , , </u>
12-11-07	NOTES. (A	Contraction (1)			Oil Keletining	
GENERAL INSPECTION	NOTES: {AI	tach extra si	eets as needed P TV	delivered	aliente ins	pection
TATARC TO A	<u> </u>		<u>,</u>	.,,		<u> </u>
ased on the information o	htained from t	he facility st	aff. review of e	fluent monitori	ng data, and the observ	ed site conditions
perations at this facility or	n this date; this	s facility is in	compliance w	th the requirem		
	X Yes	□ No, Foll	ow-Up Require	ed.	8 n	
FOLLOW-UP ACTION (S	S): {Attach ex	tra sheets as	needed}	n even er ner e e e e e e e e e e e e e e e	DUE D	ATE (S)
CTOR (S): Moralis	(m)				DATE: 6/25/0	3
	S. S. S.				DATE: 6/25/0	x
Christ .				(Print)	;	
TRY: Christ	MAUNU			(4.11.10)		
TRY: Chron T	MAUNU 16/25/18)		(Signature)	DATE:	

Manual Control of the Control of the

Total Time: hrs. (Include prep:/follow-up/review)

Org Id 25447

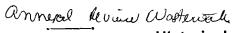
Analyte Name	Result Op	. Numeric Result	Analyte Units	Tester	Sample Type	Collection Date	Location Code
solids - total	=	37200	mg/L	self	composite	04/26/2007 2:30 PM	1A
solids - total			inimum	37,200.00	000 mg/L	Count 1	
		_	Average	37,200.00		•	
			ximum	•	000 mg/L		
						04/04/2007 2:25 DM	
solids - total dissolved	=		lbs/day	self self	composite	01/04/2007 2:25 PM 02/28/2007 2:50 PM	1A
solids - total dissolved	=		lbs/day		composite		1A
solids - total dissolved	=		lbs/day	self	composite	03/07/2007 3:40 PM	1A
solids - total dissolved	=		lbs/day	self	composite	04/26/2007 2:30 PM	1A
solids - total dissolved	=		lbs/day	self	composite	07/20/2007 2:25 PM 08/09/2007 11:35 AM	1A 1A
solids - total dissolved	=		lbs/day	self	composite	10/29/2007 11:35 AM	1A 1A
solids - total dissolved	=		lbs/day	self	composite	01/29/2007 2:30 PM 01/28/2008 2:25 PM	1A 1A
olids - total dissolved			lbs/day	self	composite	04/29/2008 2:50 PM	1A
olids - total dissolved	=		lbs/day	self	composite		'^
solids - total dissolved			inimum		000 lbs/day	Count 9	
			Average		667 lbs/day		
		Ma	ximum	1,383.00 	000 lbs/day		_
olids - total dissolved @180C	=	3820	mg/L	city	composite	02/27/2007 2:00 PM	1A
olids - total dissolved @180C	=	35500	mg/L	city	composite	04/12/2007 2:00 PM	1A
olids - total dissolved @180C	=	67700	mg/L	city	composite	07/30/2007 2:00 PM	1A
olids - total dissolved @180C	=	35700	mg/L	city	composite	10/25/2007 2:06 PM	1A
olids - total dissolved @180C	=	12200	mg/L	city	composite	02/27/2008 2:14 PM	1 A
olids - total dissolved @180C	=	78100	mg/L	city	composite	04/22/2008 2:04 PM	1A
solids - total dissolved @180C		M	inimum	3,820.00	000 mg/L	Count 6	
•		Į.	Average	38,836.60	667 mg/L		
		Ma	ximum	78,100.00	000 mg/L		
inc	=	0.431	mg/L	self	composite	01/04/2007 2:25 PM	1A
inc .	=	0.251	mg/L	city	composite	02/27/2007 2:00 PM	1A
inc	=	0.306	mg/L	self	composite	07/20/2007 2:25 PM	1A
inc	<	0.05	mg/L	city	composite	07/30/2007 2:00 PM	1A
inc	=	0.59	mg/L	self	composite	12/19/2007 2:25 PM	1 A
inc	=	0.51	mg/L	self	composite	12/21/2007 2:25 PM	1A
inc	=	0.515	mg/L	self	composite	01/28/2008 2:25 PM	1 A
inc	=	0.309	mg/L	city	composite	02/27/2008 2:14 PM	1 A
inc	<	0.469	mg/L	self	composite	04/29/2008 2:50 PM	1A
zinc		M	inimum	0.02	250 mg/L	Count 9	
			Average	0.3	524 mg/L		
			ximum		900 mg/L		

^{***} Note - those results which have an operator of '<' are divided in half to determine minimums, maximums, and averages

Org Id 25447

Org Name KINDER MORGAN	BULK TERM. 5 I	nc.	Permit Number	400.132	
Analyte Name	Result Op	Numeric Analyte Result Units	Sample Tester Type	Collection Date	Locatior Code
flow	=	3553 gallons	self composite	01/04/2007 2:25 PM	1A
low	=	2365 gallons	self composite	02/28/2007 2:50 PM	1A
ow	=	2274 gallons	self composite	03/07/2007 3:40 PM	1A
ow	=	3391 gallons	self composite	04/26/2007 2:30 PM	1A
ow	=	2293 gallons	self composite	07/20/2007 2:25 PM	1A
ow .	=	5379 gallons	self composite	08/09/2007 11:35 AM	1A
ow	=	3536 gallons	self composite	10/29/2007 2:30 PM	1A
ow	=	2321 gallons	self composite	01/28/2008 2:25 PM	, 1A
ow	=	2284 gallons	self composite	04/29/2008 2:50 PM	1A
low		Minimum	2,274.0000 gallons	Count 9	
		Average	3,044.0000 gallons		
		Maximum	5,379.0000 gallons		
il/grease - nonpolar	<	4.85 mg/L	self grab	07/20/2007 2:25 PM	1A
il/grease - nonpolar	=	4.58 mg/L	self grab	01/28/2008 2:05 PM	1 A
oil/grease - nonpolar		Minimum	2.4250 mg/L	Count 2	
		Average	3.5025 mg/L		
		Maximum	4.5800 mg/L		
il/grease - total	< .	4.81 mg/L	self grab	01/04/2007 2:10 PM	1A
l/grease - total	= '	16 mg/L	city grab	02/27/2007 2:32 PM	1A
il/grease - total	=	14 mg/L	self grab	07/20/2007 2:25 PM	1A
il/grease - total	=	14 mg/L	city grab	07/30/2007 2:15 PM	1A
il/grease - total	=	7.36 mg/L	self grab	01/28/2008 2:05 PM	1A
il/grease - total	=	12 mg/L	city grab	02/27/2008 2:08 PM	1A
oil/grease - total		Minimum	2.4050 mg/L	Count 6	
		Average	10.9608 mg/L		
		Maximum	16.0000 mg/L		
4	=	7.52 std units	self grab	01/04/2007 2:10 PM	1A
н	=	7 std units	city [·] grab	02/27/2007 2:32 PM	1A
н	=	6.9 std units	city grab	04/12/2007 1:50 PM	1A
-1	=	6.9 std units	self grab	04/26/2007 2:15 PM	1A
4	=	8.01 std units	self grab	07/20/2007 2:25 PM	1A
Н	=	7.1 std units	city grab	07/30/2007 2:15 PM	1A
-1	=	7.7 std units	city grab	10/25/2007 2:06 PM	1A
1	=	8.5 std units	self grab	10/29/2007 2:10 PM	1A
4	=	6.97 std units	self grab	01/28/2008 2:05 PM	1A
4	=	7.5 std units	city grab	02/27/2008 2:08 PM	1Å
4	=	6.9 std units	city grab	04/22/2008 2:04 PM	1A
Н	=	7.72 std units	self grab	04/29/2008 2:45 PM	1 A
Н		Minimum	6.9000 std units	Count 1	2
		Maximum	8.5000 std units		

^{***} Note - those results which have an operator of '<' are divided in half to determine minimums, maximums, and averages



Historical Analytical Report for 09/01/2004 - 09/01/2005

09/08/2005

Page 18 of 79

Org Id 25447

Analyte	Result	Numeric	Analyte		Sample	Collection	Location
Name	Op	Result	Units	Tester	Type	Date	Code
low	=	2482	gallons	self	composite	11/12/2004 2:00 PM	1A
low	=	4648	gallons	self	composite	01/12/2005 2:25 PM	1A
low	=	2626	gallons	self	grab	02/18/2005 2:20 PM	1A
low	=	2286	gallons	self	composite	07/20/2005 2:25 PM	1A
flow		Mi	nimum	2,286.0	000 gallons	Count 4	
		Δ	verage	3,010.5	000 gallons		
		Ma	ximum	4,648.0	000 gallons		
il/grease - nonpolar	<		mg/L	self	grab	01/12/2005 1:55 PM	1A
il/grease - nonpolar	=	18.5	mg/L	self	grab	01/26/2005 1:55 PM	1A
oil/grease - nonpolar	=	32.5	mg/L	self	grab	02/18/2005 2:20 PM	1A
il/grease - nonpolar	<		mg/L	self	grab	07/20/2005 2:05 PM	1A
oil/grease - nonpolar		Mi	nimum	18.5	000 mg/L	Count 4	
		A	verage	25.5	000 mg/L		
		Ma	ximum	32.5	000 mg/L		
il/grease - polar	=	10	mg/L	self	grab	01/12/2005 1:55 PM	1A
il/grease - polar	<		mg/L	self	grab	01/26/2005 1:55 PM	1A
il/grease - polar	=	22.8	mg/L	self	grab	02/18/2005 2:20 PM	1A
oil/grease - polar		Mi	nimum	10.0	000 mg/L	Count 3	
		A	verage	16.4	000 mg/L		
		Ma	ximum	22.8	000 mg/L		
vil/grease - total	=	10	mg/L	self	grab	01/12/2005 1:55 PM	1A
il/grease - total	=	20.3	mg/L	self	grab	01/26/2005 1:55 PM	1A
il/grease - total	=	55.2	mg/L	self	grab	02/18/2005 2:20 PM	1A
il/grease - total	=	49	mg/L	city	grab	02/22/2005 2:03 PM	1A
oil/grease - total	< .		mg/L	self	grab	07/20/2005 2:05 PM	1A
oil/grease - total	=	13	mg/L	city	grab	07/25/2005 2:00 PM	1A
oil/grease - total		Mi	nimum	10.0	000 mg/L	Count 6	
		Α	verage	29.5	000 mg/L		
		Ma	ximum	55.2	000 mg/L		
H	=	6.9	std units	city	grab	10/21/2004 2:00 PM	1A
Н	=	7.01	std units	self	grab	11/12/2004 2:00 PM	1A
Н	=	9.97	std units	self	grab	01/12/2005 1:55 PM	1A
Н	=	7.7	std units	self	grab	01/26/2005 1:55 PM	1A
Н	=	8.37	std units	seif	grab	02/18/2005 2:20 PM	1A
Н	= .	7.1	std units	city	grab	02/22/2005 2:03 PM	1A
Н	=	6.7	std units	city	grab	04/18/2005 1:58 PM	1A
Н	=	7 27	std units	self	grab	07/20/2005 2:05 PM	1A

^{***} Note - those results which have an operator of '<' are divided in half to determine minimums, maximums, and averages



ENVIRONMENTAL SERVICES



Water Pollution Control Laboratory

6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Dan Saltzman, Commissioner • Dean Marriott, Director

FOR OFFICE USE ONLY

Date of Violation:	10/23/08 through 10/24/08	Permit No.:	400.132	
Nature of Violation:	TDS limit excedence	Collected by:	city	
Response Date:	6/22/09	Sample Type:	composite	
Response Number:	CTM-2008-091	Sample Location:	SMH#1A	

COMPLIANCE TELEPHONE MEMORANDUM

Company:

Kinder Morgan Bulk Term#5

15550 N. Lombard Portland, Ore 97203

Contact:

Jack Waller

Date:

6/22/09

Summary:

Schedule A of Wastewater Discharge Permit No. 400.132 specifies a Total Dissolved Solids (TDS) discharge limit of 3,500 lbs/day. On 10/23/08 through 10/24/08, City of Portland field crew conducted composite sampling event for Total Dissolved Soilds. The analysis showed a total discharge of 3609 lbs of TDS during the sampling event. The TDS excedence is a minor violation of Wastewater Discharge Permit No. 400.132.

Requirement:

There is no civil penalty assessed with this violation. Resampling requirements were met with KMT-5 sampling event conducted on 10/30/08.

Biola Cruse

Permit Manager

Date |

CTM2008091.KMT5.doc

Water Pollution Control Laboratory

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FOR OFFICE USE ONLY

Date of Violation:	7/31/08	Permit No.:	400.132
Nature of Violation:	Limit exceedance for Zinc, Oil and grease	Collected by:	Collected by City
Response Date:	8/12/2008	Sample Type:	Composite and Grab
Response Number:	CTM-2008-039 and CTM-2008-040	Sample Location:	SMH #1A

COMPLIANCE TELEPHONE MEMORANDUM

Company:

Kinder Morgan Bulk Terminal #5

15550 N. Lombard Portland, Ore 97203

Contact:

Jack Waller

Date:

8/12/08

Summary:

Schedule A of Wastewater Discharge Permit No. 400.132 specifies a Zinc daily limit of 3.7 mg/L and a Oil and Grease limit of 110 mg/L. On 7/31/08, Kinder Morgan Bulk Terminal #5 exceeded both limits with a 4.49 mg/L result for Zinc and a 135 mg/L for Oil and Grease.

The Zinc, Oil & grease exceedance are minor violation of Wastewater Discharge Permit No. 400.132. No civil penalties will be assessed

Requirement:

Please resample for Oil/Grease and Zinc during next discharge to the City of Portland sanitary system and submit analytical results within 30

days of sampling.

Biola Cruse

Permit Manager

8/12/08

Date

CTM2008039&2008040 081208

KInderMorganBulkTerm#5
Ph: 503-823-5600 Fax: 503-823-5656 • www.cleanriverspdx.org • Using recycled paper. • An Equal Opportunity Employer.

For disability accommodation requests call 503-823-7740, Oregon Relay Service at 1-800-735-2900, or TDD 503-823-6868.

CITY OF PORTLAND INDUSTRIAL WASTEWATER DISCHARGE COMPLIANCE MONITORING REPORT

Date Postmarked/Received

Kinder Morgan Bulk Term. 5

30 days after sample

400.132

collected

INDUSTRY NAME:

PERMIT NUMBER:

REPORT DUE DATE:

For Industrial Source Control Division Use Only Org. ID#-25447

Date Entered

Entered By:

		2000 040	Comments:		A STATE OF THE STA
Resample for CTM-	· <u>2008-039&</u> 2	<u>2008-040</u>	A A A A A A A A A A A A A A A A A A A		
SAMPLE DATE	POINT OF C	************	AMPLE TYPE		
PARAMETER	ANALYSIS METHOD	REPORTED CONCENTRATION	COMPOSITE MDL	LIMITS DAILY MONTHLY	COMMENTS
zinc		mg/L		3.7 mg/L	
SAMPLE DATE PARAMETER	3 2020 Sept PACC 5% - Cy	OMPLIANCE S IA REPORTED	AMPLE TYPE GRAB MDL	LIMITS	COMMENTS
Oil and Grease (NP)	METHOD	CONCENTRATION mg/L	<u> </u>	DAILY MONTHLY 110 mg/L	Non-polar
a system designed to ens person or persons who n	ure that qualifi nanage the syst wledge and bel	ed personnel properly em, or those persons d ief, true, accurate, and	gather and evalua irectly responsible complete. I am a	red under my direction or supe te the information submitted. It for gathering the information, ware that there are significant p ng violations.	Based on my inquiry of the the information submitted
Signature:			Date:		
					,

Waller, Jack

From:

Waller, Jack

Sent:

Saturday, August 30, 2008 10:05 AM

To:

'biolac@bes.ci.portland.or.us'

Cc:

Maunu, Neil

Subject:

Wastewater Resample

Biola,

The Terminal's wastewater discharge has been re-sampled on 8/28/08 by Test America and we await the results.

Regards,

Jack Waller

KINDER / MORGAN

Kinder Morgan Terminals, Inc.

Terminal Manager

Portland Bulk Terminals, L.L.C.

Terminal 5 Portland, Oregon

Phone: (503) 285-4200 ext. 40

Fax: (!

(503) 285-7733

Cell: (503) 807-9686

mailto:wallerj@kindermorgan.com

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3556 NW Front Avenue
Suite 360
Portland Oregon
97210
503/248-0848 tel
503/222-3070 fax
www.ssamarine.com

April 27, 2011

Mr. Biola Cruse Permit Manager Industrial Source Control Division 6543 N. Burlington Ave. Bldg 217 Portland, Oregon 97203-5452

Re: Wastewater Permit Applications for Kinder Morgan Bulk Term #5 (#400.132)

Dear Mr. Cruse:

Our company SSA Pacific Inc., will be become the new terminal operator for the bulk export facility known as Portland Bulk Terminal 5 beginning June 1, 2011. Kinder Morgan is the current operator.

By our telephone discussions, you have advised me that the wastewater permit that is now in place will need reapplication.

To this end please find enclosed a new Permit Application, Environmental Survey Part II and revised Signatory Authority form. If this form has not been completed correctly, please let me know and I will amend.

For your guidance, neither the operation nor company personnel at the facility will change when we take control over in June.

Dustin Wilson, the Assistant Manager at the terminal will be responsible for answering any additional questions in regards to these application documents. His contact number after June 1st will remain the same, (503-285-4200 ext. 12) but e-mail address will change to Dustin.wilson@ssamarine.com from the current

dustin wilson@kindermorgan.com.

Upon review of these documents should you have any questions please contact Dustin Wilson at the above referenced numbers or myself.

Sincerely,

Paul Huculak General Manager

SSA Pacific Inc., Portland, OR.

Enc: Permit Application

Environmental Survey Part II Signatory Authority Form

City of Portland Letter to Kinder Morgan's Brent McMullin- as reference.

CC: DUSTIN WILSON

Water Pollution Control Laboratory

6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Dan Saltzman, Commissioner • Dean Marriott, Director

MUNICIPAL PRETREATMENT PROGRAM

INDUSTRIAL USER

COMPANY OFFICIAL SIGNATORY AUTHORIZATION

SSA PACIFIC INC

The undersigned person has been designated by Kinder Morgan Bulk Terminal #5 in Portland, Oregon as the duly authorized representative with the assigned responsibility for environmental matters and compliance with the firm's City of Portland Waste Water Discharge Permit (#400.132) and the Code of the City of Portland.

This authorization is made pursuant to 40 CFR 403.12(1)(1-3).
DESIGNEE: DUSTIN WILSON
name
Assistant Manager
position/title
RESPONSIBLE CORPORATE OFFICIAL: PAUL HUCULAK
print name here
signature here
General Manager
SSA PACIFIE, INC

40 CFR 403.12(1)(4)

If an authorization under paragraph (1)(3) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirement of paragraph (1)(3) of this section must be submitted to the Control Authority prior to or together with any reports to be signed by an authorized representative.



ENVIRONMENTAL SERVICES

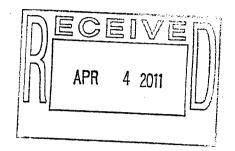


Water Pollution Control Laboratory

6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Dan Saltzman, Commissioner • Dean Marriott, Director



Brent McMullin Kinder Morgan Willbridge Bulk Terminals 1610 C Street Ste. 205 Vancouver, Wa 98663



Dear Mr. McMullin:

Re: Wastewater Discharge Permit for Kinder Morgan Bulk Term #5

Thank you for notifying the City of Portland Bureau of Environmental Services of the change in ownership regarding Kinder Morgan Bulk Terminal #5.

Unfortunately due to the change in ownership, a new Environmental Survey II and Permit Application must be filled out and submitted prior to the new ownership change.

Your current Wastewater Discharge Permit #400.132 was issued to your specific facility and cannot be transferred by the industrial user.

I have included with this letter an Environmental Survey II, Permit Application and a Signatory Authority form for you and/or new management to complete.

Please complete and submit these forms to your BES Permit Manager by May 31st, 2011.

If you have any further questions, please feel free to call me @ 503-823-9779

Sincerely,

Biola Cruse Permit Manager

Industrial Source Control Division



City of Portland Environmental Services Water Pollution Control Laboratory



6543 N. Burlington Avenue, Portland, Oregon 97203-5452 (503) 823-5600 FAX: (503) 823-5559

7-5 C0P4

Permit Application

INDUSTRIAL SOURCE CONTROL DIVISION

Water Pollution Control Laboratory 6543 N. Burlington Ave., Portland, Oregon 97203-5452 (503) 823-5600

INDUSTRIAL WASTEWATER DISCHARGE PERMIT APPLICATION

In Accordance with the Federal Clean Water Act and ORS 468B, the City of Portland operates a mandated program for the regulation of discharges of industrial wastewater to the City's sewer collection system. This program is implemented through a National Pollutant Discharge Elimination System (NPDES) permit and the City Code Chapter 17.34.

The Bureau of Environmental Services, through its Industrial Source Control Division, is responsible for the protection of the sewer collection system and public health and safety. The Division administers wastewater discharge permits as outlined on the City Code Chapter 17.34. These permits describe the manner of discharge, applicable pollutant limitations, and other terms and conditions of wastewater discharges. By completing the *Industrial Wastewater Discharge Permit Application*, you are helping the City of Portland meet its requirements.

Confidential Information

As outlined in 40 CFR 403.14 (a)-(c) and ORS 192.430, any information submitted to the City under the Pretreatment Program requirements may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions, or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the City may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR part 2 (Public Information) and ORS 192.440(2).

Information and data provided to the City under these requirements which is effluent data shall be available to the public without restriction.

All other information which is submitted to the State or POTW shall be available to the public at least to the extent provided by 40 CFR 2.302 and ORS 192.440(2).

If, at any time, there is insufficient space to complete an answer, continue your response on a separate piece of paper. Indicate the section and question number next to your response.

Page 1 of 19

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION I: GENERAL FACILITY INFORMATION

- 1. Enter the name of the company, *i.e.*, the name of the company legally responsible for this facility.
- 2. Enter the name of the facility, such as the name used on letterhead and/or correspondence or advertising.
- 3. Enter the street address where the facility is located.
- 4. Enter the mailing address of the facility, if different from the facility street address above.
- 5. Enter the name, title, telephone number, and fax number of the person who is <u>most</u> familiar with the facts reported on this form and who can be contacted by City staff. Generally, this person is the facility's maintenance supervisor or engineer.
- 6. Enter the approximate month and year that operations began, or are proposed to begin, otherwise use best estimate.



ENVIRONMENTAL SERVICES



Water Pollution Control Laboratory 6543 N. Burlington Ave., Portland, Oregon 97203-5452 (503) 823-5600

INDUSTRIAL WASTEWATER DISCHARGE PERMIT APPLICATION

SECTION I. CENEDAL INCODAL TION

SECTION I: GENERAL INFORMATION	
Confidential Information - Indicate those sections of this application that you wish to remain confidential <u>as well as</u> your reasons for requiring confidentiality. Wastewater discharge characteristics can not be considered confidential.	
1. SSA Pacific The (Company Namé)	
2. Portland Bulk Terminal 5 (Facility Name)	
3. 15550 No Leurand T-5 (Facility Address, Street)	
Portland Ovegon 97203 (City) (State) (Zip Code)	
4. 15550 - N. Lowbard. T-5 (Mailing Address, Street/PO. Box)	
Portland Oregon 97203 (City) (State) (Zip Code)	
Provide the name of the person to contact on information contained in this questionnaire: Duskin Wilson (Name) (Name)	2
Assistant Manager 503-285-7133	
(Title) (Fax) Initial startup date of operations at this facility: March, 1997	

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION I: GENERAL FACILITY INFORMATION, Continued

- 7. Enter the name, title, telephone number, and fax number of the person who is responsible for responding or organizing a response to emergencies at this facility, and who can be contacted by City staff. These emergencies may include spills and chemical releases, fires, floods, or earthquakes.
- 8. Check the appropriate box and make the necessary changes or corrections to the enclosed document, if needed.

SECTION I: GENERAL FACILITY INFORMATION, Continued

7. Ferson to be contacted in case of an emergency at this facility.	
Dustin Wilson	503-975-7292
Name	Phone
Assistant Manager Title	503-285-7733 Fax

8. Is all of the information previously submitted in your facility's *Environmental Survey Part II*, still current, up-to-date, and correct?

Yes No []

{A copy of your facility's Environmental Survey Part II is included for your reference.}

If you checked No, make the needed changes to the enclosed Environmental Survey Part Π , initial and date all changes and send in the corrected copy of the Survey with the completed Permit Application.

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION II: FACILITY PROCESS FLOW INFORMATION

- 1. Provide the daily average flows discharged in gallons per day (gpd) for the last 12 months. For estimating sanitary flow, use 25 gallons per employee per day. Be as specific as possible. If the exact amount of water is not known for each item, then estimate the amount as best as possible and note how the estimation was determined.
- 2. Check the appropriate box and provide the necessary information.

Page 6 of 19

SECTION II: FACILITY PROCESS FLOW INFORMATION

1. For your facility, provide the following flows for each of your processes or proposed processes (i.e.,

manufacturing process line or other processes that may generate process wastewater).

Total Plant Flow in Gallons Per Day (gpd) discharged to the	-		•
Daily Average 3,200 pc Daily Individual Process Flows in Gallons Per Day (gpd)	Wiaximum	9,000 g	
Process Description	Average Flow, gpd	Maximum Flow, gpd	Type of discharge
Washdown water	3,200_	9,000_	batch
			-
			-
2. Is an inspection or sampling manhole structure available on-site?	Yes X	N	o []
• If No, is one planned?	Yes []	No	o []
• If Yes, provide location below and include as part of the procedure Attachment B).	ess flow schem	natic (see also	
· Location description: <u>Sampling Mauhole</u>	is loca	ated a	t the
· Location description: Sampling Mountale main entrance gate. Security gate coordinate safety precaut	office	ers at th	e main
gate coordinate safety precaut	ions de	erive so	<u>unp</u> ling
time periods			<u> </u>
			·
			- .
	· · · · · · · · · · · · · · · · · · ·		
<u> </u>		······································	·

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION II: FACILITY PROCESS FLOW INFORMATION, Continued

- 3. Check the appropriate boxes and provide the required information.
- 4. Briefly describe any previous spills of raw materials, products, or process wastes that were or may have been discharged to the sewer collection system. Also list all corrective actions that were taken to clean-up the spills and procedures that were put in place to prevent a re-occurrence.

SECTION II: FACILITY PROCESS FLOW INFORMATION, Continued

3.		plan to have, automationent in use or included			Continuous was	tewater flow
•	Current:	Flow Metering		Yes [No []	N/A []
		Sampling Equipment	i	Yes []	No 🗸	N/A []
•	Planned:	Flow Metering		Yes []	No []	N/A []
		Sampling Equipment	:	Yes []	No []	N/A []
	the process flow	the equipment below a schematic in Attachme	ent B:	-	•	
	(see	nics DCT attached &	Pow	schem	atic)	
				····	<u> </u>	
						·.
4.	from the fac	ibe below, or on a separ ility. Also list the clear rent a reoccurrence.				
4.	from the fac	ility. Also list the clear				
4.	from the fac	ility. Also list the clear				
4.	from the fac	ility. Also list the clear				
4.	from the fac	ility. Also list the clear				
4.	from the fac	ility. Also list the clear				
4.	from the fac	ility. Also list the clear				
4.	from the fac	ility. Also list the clear				

INTRODUCTION: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION III: FACILITY WASTEWATER INFORMATION

This section, in two parts, details the collection of the necessary quantitative wastewater information required to establish applicable pretreatment limits and monitoring requirements for each industrial user. Contact the Industrial Source Control Division if there are any questions on what limits apply, what parameters to sample, sampling requirements, and from where to take the samples. Samples should be taken of the final effluent prior to discharge to the City's sewer collection system. If there is more than one discharge of process wastewater to the City's sewer lines, photocopy this page and supply the analytical results for all process wastewater discharges.

Existing Facility: (report results in concentrations (mg/L) or mass (lbs))

Each Facility must complete Attachment A, Priority Pollutants list. This information will be used to help determine what may or may not be present in the facility's effluent.

Each facility will sample, have analyzed, and report on all pollutants as specified by the City. If mass limits apply, the facility must report results on a mass basis (concentration x regulated process flow). Attach all calculations.

A TORROR OF THE STATE OF THE ST

Samples collected must be representative and taken during peak production. Samples must be collected each day for three consecutive days, and analyzed separately.

An existing facility can use existing historical data, on file with the City, to fulfill this requirement.

New Facility: (report results in concentrations (mg/L) or mass (lbs))

This includes a new business moving into an existing facility or a new business proposing to construct a new building. A new facility should be in compliance with applicable pretreatment standards upon commencement of discharge and is required to sample and submit the final compliance report within 30 days of commencement of discharge. Because no discharge of process wastewater has occurred, provide your best estimate of the discharge. This estimate shall be confirmed through monitoring of the facility's effluent.

Each Facility must complete Attachment A, Priority Pollutants list. This information will be used to help determine what may or may not be present in the facility's effluent.

SECTION III: FACILITY WASTEWATER INFORMATION

TABLE 1 APPLICABLE LIMITS: 1

	<u> </u>	<u> </u>	
Suggested -		Sample Type,	Required
			Sampling
40 CFR 136	Limit.	Composite	
·			<u> </u>
			<u> </u>
			ļ
			
200.7	3.7 mg/L		
200.7	0.7 mg/L		
245.1	0.010 mg/L	Composite	
200.7	1.4 mg/L	Composite	
200.7	2.8 mg/L	Composite	
200.7	0.6 mg/L	Composite	
200.7	0.4 mg/L	Composite	
	3.7 mg/L	Composite	
405.1		Composite	
ASTM D-93-80	>140 °F	Grab	
335.2	1.2 mg/L	Grab	
1664		Grab	
	\ \		
150.1	5.0-11.5	Grab	
	S.U.		1
624 & 625	2.13 mg/L		
160.2		Composite	
376.2	4 mg/L	Grab	
603	1.0 mg/L	Grab	
625		Composite	
624	0.2 mg/L	Grab	
624	0.2 mg/L	Grab	
624	0.5 mg/L	Grab	
625	0.13 mg/L	Composite	
625	2.0 mg/L	Composite	
625		Composite	
624	0.2 mg/L	Grab	
	200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.7 200.8 405.1 ASTM D-93-80 335.2 1664 150.1 624 & 625 160.2 376.2 603 625 624 624 624 624 625 625 625	Analysis Method Local Limit	Analysis Metflod Local Grab or

This table lists the applicable Local Limits for all Permitted Industrial Users. Categorical Industrial Users may have additional limits that apply.

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION III: FACILITY WASTEWATER INFORMATION

PART A. NON-CATEGORICAL INDUSTRIAL FACILITIES

- 1. Each Permitted Industrial User is required to perform self monitoring sampling and analyses to help document compliance with the pretreatment regulations. Provide the requested information even if all of the self monitoring analyses are performed by facility staff:
- 2. Provide the requested information. Most Commercial Laboratories participate in at least one performance evaluation or certification program to help insure and document that the data generated is valid and credible.
- 3. After comparing the process wastewater data to the discharge limits that are listed in Table 1, check the appropriate box and complete as requested. Describe any additional O & M or installation of pretreatment equipment required to meet the listed discharge limits and attach a proposed compliance schedule. Specify the major events. After approval by the city, a Compliance Order will be put in place. Failure to comply with the approved schedule will subject the facility to enforcement actions.

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SECTION III: FACILITY WASTEWATER INFORMATION

PART A. NON-CATEGORICAL INDUSTRIAL FACILITIES

1.	Provide name and address of the commercial testing lab(s) who is (are) perform	rming analy	ses:
	Approx Labo		
	(Laboratory Name)		
	12232 - SW. Garden Place (Street Address)		
	(birect Address)		• ••
_	Tigard Oregon (State)	9	723 3 Zip Code)
	503-718-2323 503-718-0333 (Phone) (Fax)		
2.	List the Certification Program(s) in which the laboratory participates:		
	see attachelcertification from A	Dex L	abs
	DRELON CERT TO BE FORWARDED WHEN PETERVE	D	
3.	Compliance Certification: Compare the sample results against the listed Loc	al Limits (Ta	able 1).
	a.) Is the facility meeting applicable pretreatment standards on a consistent Yes [] No [] Don't Know []	basis?	NA
	If Don't Know, then compliance must be evaluated after the baseline mo	nitoring is c	ompleted.
:	If No, do you require:	· .	
	b.) Additional operation and maintenance (O&M) to achieve compliance?	Yes []	No []
	c.) New or additional pretreatment facilities to achieve compliance?	Yes []	No []
	If additional O&M or new or additional pretreatment equipment will be requimeet pretreatment standards on a consistent basis, attach a description of what proposed schedule for completion of the work.		•
	d.) I have provided a compliance schedule.	Yes []	No [
	Describe the compliance schedule of events on a separate sheet. Detail what entails and the proposed due dates for each of the tasks involved. The propos is subject to prior approval by the City.		

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION III: FACILITY WASTEWATER INFORMATION, Continued

PART B. CATEGORICAL INDUSTRIAL FACILITIES

- 1. List each regulated process, its production rate (i.e. 1,000 lbs. of product per day), the process wastewater flow rate in gpd, the applicable SIC code, and the pretreatment category. If the exact flow rate is not known for each process, then estimate the amount as best as possible and note how the estimation was determined.
 - Baseline Monitoring Report: As per 40 CFR 403.12, each Categorical Industrial User must submit a Baseline Monitoring Report (BMR). This one time submital should identify the nature and concentrations of all regulated pollutants that might be in the facility's discharge. In the case of new facilities this report must be submitted 90 days prior to the start of discharge. Estimates may be used but these estimates shall be confirmed through final compliance monitoring of the facility's effluent. If the effluent samples were taken at one combined point, indicate alongside the regulated process line what process flows are co-mingled at the sampling point. Contact the City's Industrial Source Control Division for guidance on where to take samples and how many samples to take.
- 2. Each Permitted Industrial User is required to perform self-monitoring sampling and analyses to help document compliance with the pretreatment regulations. Provide the requested information even if all of the self monitoring analyses are performed by facility staff.
- 3. Provide the requested information. Most Commercial Laboratories participate in at least one performance evaluation or certification program to help insure and document that the data generated are valid and credible.

Page 14 of 19



Apex Laboratories, LLCTigard, OR

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation. This certificate is effective November 1, 2010 and shall expire October 31, 2011.

Witnessed under my hand on October 27, 2010

Stewart M. Lombard

Lab Accreditation Unit Supervisor

Stewart M. Sombord

Laboratory ID **C903**

SECTION III: FACILITY WASTEWATER INFORMATION, Continued

PARTB. CATEGORICAL INDUSTRIAL FACILITIES

1. Summarize each regulated process: (report concentrations in mg/L or mass in lbs.).

Regulated Process Description	Production Rate	Process Flow	SIC Code	
				Category
	·		·	
			. *	
				_
	·			
			•	
				<u> </u>
				· · · · · · · · · · · · · · · · · · ·
				-

Total plant flow: (In gallons per day, gpd)

2.	Provide name and addres	s of the commercial	testing lab(s)) who is ((are)	performing	analyses:
----	-------------------------	---------------------	----------------	------------	-------	------------	-----------

(Laboratory Name)

(Street Address)

(City) (State) (Zip Code)

(Phone) (Fax)

3. List the Certification Program(s) in which the laboratory participates:

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION III: FACILITY WASTEWATER INFORMATION, Continued

- 4. As discussed in question #1 of this subsection, a BMR includes sampling and analysis data of the facility's effluent. Daily maximum and average pollutant concentrations from each categorically regulated process must be reported. A report form is included as Attachment D. A minimum of four grab samples for pH, cyanide, phenols, oils & greases, sulfide, and volatile organics must be taken, if applicable to the facility's categorically regulated processes. For all other regulated pollutants, a 24 hour composite sample is required. All such samples must be representative of the facility's daily operations. After comparing the analysis data to the discharge limits listed in the appropriate subpart of 40 CFR and the Local Limits listed in Table 1, check the appropriate box and complete as requested. Describe any additional O & M or installation of pretreatment equipment required to meet the listed discharge limits and attach a proposed compliance schedule. Specify the major events, bench marks, needed to achieve compliance, as well as dates for completion of the events. After approval by the City, the compliance schedule will be in place. Failure to comply with the approved schedule will subject the facility to escalating enforcement actions.
- 5. Total Toxic Organics (TTOs): Facilities who use toxic organics, as listed by EPA in its published categorical pretreatment standards, are required to meet the TTO pretreatment standards. Each facility must initially sample its discharge for TTOs to determine if the facility's discharge is in compliance with applicable limits. After a facility is found to be in compliance with the applicable TTO discharge limits, the Industrial User may adopt either a certification statement or a solvent management plan in lieu of periodically sampling for TTOs, if these options are allowed under the facility's category. If you do not use toxic organics in your manufacturing process, you may not be required to sample for TTOs. Contact the City's Industrial Source Control Division for guidance.

Check the appropriate boxes.

SECTION III: FACILITY WAS TEWATER INFORMATION, Continued Compliance Certification: Compare the sample results against the listed Categorical Standards and 4 those listed in the Local Limits (Table 1). A) Is the facility meeting applicable pretreatment standards on a consistent basis? A DON'T KROW, then compliance must be evaluated after the baseline monitoring is completed. Additional operation and maintenance (O&M) to achieve compliance? If No, do you require C.) New or additional pretreatment facilities to achieve compliance? Dietreatinelli Och or new or additional present basis, attach a description of what is required and a prope Aretesinent standards on a consistent basis, attach a description of what is required and a proposed Schedule for completion of the work d.) Thave provided a compliance schedule. Describe the compliance schedule of events on a separate sheet proposed compliance work entails and the proposed due dates for each of the City. Total Poxic Offanics ATOS. Facilities Covered by a TTO Detreatment of the listed ATOS. Facilities Covered by a TTO Detreatment of the facilities of the solution of the facilities and the solution of the control of the solution of the covered by a tropic of the solution of the covered by a tropic of the solution of the covered by a tropic of the solution of the covered by a solution of the c Control Oxic Of the Banics (TTOs).

A start home, A for a listing of the TTOs applicable to your molustrial cases of the Indiastrial See also the table Control of the listed TYOs is to help determine compliance to preteather the radiation for a listing of the TYOs applicable to your industrial category. See also nice a) We Presently use or Plan to use toxic Organics listed in the categorical present standards. b.) A solvent management plan has been developed and is attached. dates for each of the lasks involved The proposed schedule is subject to Prior approval by the City After No. 1. Alack a HTD DOSed Schedule to develop and implement a Solvent Management of the City the C.) Thave provided a proposed schedule to develop and implement a Solvent Management Plan. Rev. 9/14/98

INSTRUCTIONS: INDUSTRIAL WASTEWATER PERMIT APPLICATION SECTION IV: SIGNATURES & CERTIFICATIONS

The <u>Qualified Professional Certification</u> pertains to the actual preparer of this form if different than the Responsible Corporate Official. Said person could be a consultant or professional engineer hired to gather and prepare the required information for this application.

This form shall be signed by a <u>Responsible Corporate Official</u>, as defined in 40 CFR 403.12(1). Said person may be either a general partner, a corporate officer, or by a duly authorized representative who has responsibility for the overall operation of the facility that discharges process wastewater to the City's sewer.

Photocopy the completed survey form for your records and return the original survey to:

Industrial Source Control Division
City of Portland Environmental Services
Water Pollution Control Laboratory
6543 N. Burlington Avenue
Portland, OR 97203-5452

SECTION IV: SIGNATURES & CERTIFICATIONS

Qualified Professional Certification:

I hereby certify under penalty of law that this information was obtained in accordance with the applicable procedures and requirements as specified in the General Pretreatment Regulations and amendments thereto and the City's sewer use ordinance. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name (print)

Jeroue

Signature

Authorized Representative Statement: {40 CFR 403.6(a)(2)(ii)}

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief is true accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Mark Knudsen Name (print)

Signature

ATTACHMENT A PRIORITY POLLUTANTS

Priority Pollutant Information

1. Indicate by placing an "X" in the appropriate space by each listed chemical whether it is Suspected to be Absent, Known to be Absent, Suspected to be Present, or Known to be Present in your manufacturing or service activity, or generated as a byproduct.

				S = 24-31	Known	Annual	Loss to
No.	Pollutant of Concern	Known Absent	Suspected Absent	Suspected Present	Present	Annuai Usage	Loss to Sewer
	A Paragraph of the Control of the Co	Absent	Aosent	Tresent	Tresent	(lb./yr.)	(lb./vr.)
1	asbestos (fibrous)						
2.	cyanide (total)	ļ	•	<u> </u>			
3.	antimony (total)					· · · · · · · · · · · · · · · · · · ·	
4	arsenic (total)					<u> </u>	· ·
5.	beryllium (total)				<u> </u>	·	
6.	cadmium (total)						
7.	chromium (total)		ļ				
8.	copper (total)				<u> </u>		
9.	lead (total)						
10.	mercury (total)						
11.	nickel (total)						
12.	selenium (total)						
13.	silver (total)						
14.	thallium (total)			<u> </u>			
15.	zinc (total)						
16.	acenaphthene						
17.	acenaphthylene						
18.	acrôlein						
19	acrylonitrile	l	<u> </u>				<u> </u>
20.	aldrin						
21.	anthracene						
22.	benzene						
23.	benzidine						
24	benzo(a)anthracene						
25.	benzo(a)pyrene					<u>-</u>	·
26.	benzo(b)fluoranthene						
27.	benzo(g,h,i)perylene						
28	benzo(k)fluoranthene						
29.	a-BHC(alpha)						
30.	b-BHC(beta)						
31.	d-BHC(delta)	·					
32.	G-BHC*(gamma)						
33.	bis(2-chloroethyl)ether						
34.	bis(2-chloroethoxy)methane						
35.	bis(2-chloroisopropyl)ether						
36.	bis(chloromethyl)ether						
37.	bromodichloromethane					<u> </u>	

1 of 3

Revision 9/14/9898

	Fig. 42	1			<u> </u>	<u> </u>	
38.	bis(2-ethythexyl)phthalate	 			<u>.</u>		
39.	bromoform						
40.	bromomethane		<u> </u>			·	
41.	4-bromophenyl phenylether						-
42.	butylbenzyl phthalate				<u> </u>		
43.	carbon tetrachloride						
44.	chlordane						
45.	4-chloro-3-ethylphenol						
46.	chlorobenzene						ļ
47.	chloroethane					<u> </u>	
48.	2-chloroethylvinyl ether						
49.	chloroform						<u> </u>
50.	chloromethane						
51.	2-chloronaphthalene				<u> </u>		
52.	2-chlorophenol						
53.	4-chlorophenylphenyl ether	-					
54.	chrysene		,			· · · · · · · · · · · · · · · · · · ·	
55.	4,4'-DDE						
56.	4,4'- DDD						
57.	4,4'-DDT						
58.	dibenzo(a,h)anthracene				·		
59.	dibromochloromethane						
60.	1,2-dichlorobenzene						
61.	1,3-dichlorobenzene						
62.	1,4-dichlorobenzene						
63.	3,3-dichlorobenzidine						
64.	dichlorodifluoromethane						
65.	1,1-dichloroethane						<u> </u>
66.	1,2-dichloroethane						
67.	1,1-dichloroethene					•	
68.	trans-1,2-dichloroethene						
69.	1,4-dichlorophenol					· · · · · · · · · · · · · · · · · · ·	
70.	1,2-dichloropropane						
71.	(cis&trans)1,3-dichloropropene						
72.	dieldrin						
73.	diethyl phthalate						<u> </u>
74.	2,4-dimethylphenol		· -				
75.	dimethyl phthalate						
76.	di-n-butyl phthalate		<u> </u>				
77.	di-n-ocytl phthalate						
78.	4,6-dinitro-2-methylphenol			-	<u> </u>		
79.	1,4-dinitrophenol						
80.	1,4-dinitrotoluene		·				
81.	2,6-dinitrotoluene						
82.	1,2-diphenythydrazine						
83.	endosulfan t					<u> </u>	
84.	endosulfan tt						
85 <u>.</u>	endosulfan sulfate		·		<u> </u>		
86.	endrin	<u></u>	<u> </u>		<u> </u>		L

0.5		T	T	1	I		· · · · · · · · · · · · · · · · · · ·
87.	endrin aldehyde					-	
88.	ethylbenzene		 		 		
89.	fluoranthene				·	· · · · · · · · · · · · · · · · · · ·	
90.	fluorene						
91.	heptachlor	<u> </u>		:			
92.	heptachlor epoxide					·	
93.	hexachlorobenzene		ļ	<u> </u>			· · · · · · · · · · · · · · · · · · ·
94.	hexachlorobutadiene		ļ	ļ			
95.	hexachlorocyclobentadiene	_			ļ		
96.	hexachloroethane						
97.	indeno (1,2,3-cd)pyrene						
98.	isophorone						
99.	methylene chloride						
100.	naphthalene						
101.	nitrobenzene						
102.	2-nitrophenol						
103.	4-nitrophenol	<u> </u>					· · · · · · · · · · · · · · · · · · ·
104.	n-nitroso-dimethylamine						· · · · · · · · · · · · · · · · · · ·
105.	n-nitroso-dipropylamine						
106.	n-nitroso-diphenylamine						
107.	PCB-1016						
108.	PCB-1221						
109.	PCB-1232			·			
110.	PCB-1242						
111.	PCB-1248						
112.	PCB-1254						
113.	PCB-1260						
114.	pentachlorophenol						
115.	phenyl anthracene						
116.	phenol						
117.	pyrene						
118.	2,3,7,8-tetrachlorodibenzo-p-dioxin						
119.	1,1,2,2-tetrachloroethane					·	
120.	tetrachloroethene						
121.	toluene					· · · · · · · · · · · · · · · · · · ·	
122.	toxaphene						
123.	1,2,4-trichlorobenzene						
124.	1,1,1-trichloroethane						
125.	1,1,2-trichloroethane		-				
126.	trichloroethene						
127.	trichlorofluoromethane						
128.	2,4,6-trichlorophenol						
129.	vinyl chloride			L		<u> </u>	

ATTACHMENT B PROCESS FLOW DIAGRAM

For each major activity in which wastewater is generated, draw a diagram of the flow of materials and water from start to completed activity, showing all unit processes generating wastewater. Number each unit process having wastewater discharges to the community sewer. Use these numbers when showing this unit process in the building layout in schematic. Use the space below or additional sheets of 8x11 paper. An example is provided on the other side of this sheet. Using this example as a guide, diagram the flow of materials and water from the start of each process to the completed product or activity. Show all unit processes generating wastewater. Indicate the process flow rates in gallons per day (gpd) with numbered steps keyed to building locations.

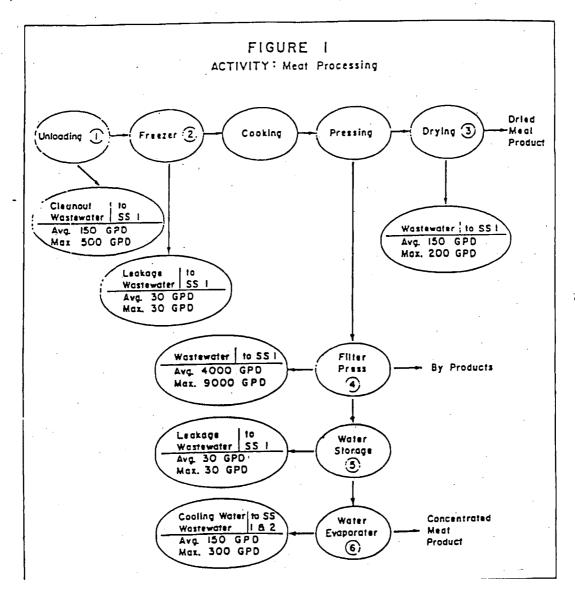
Instructions

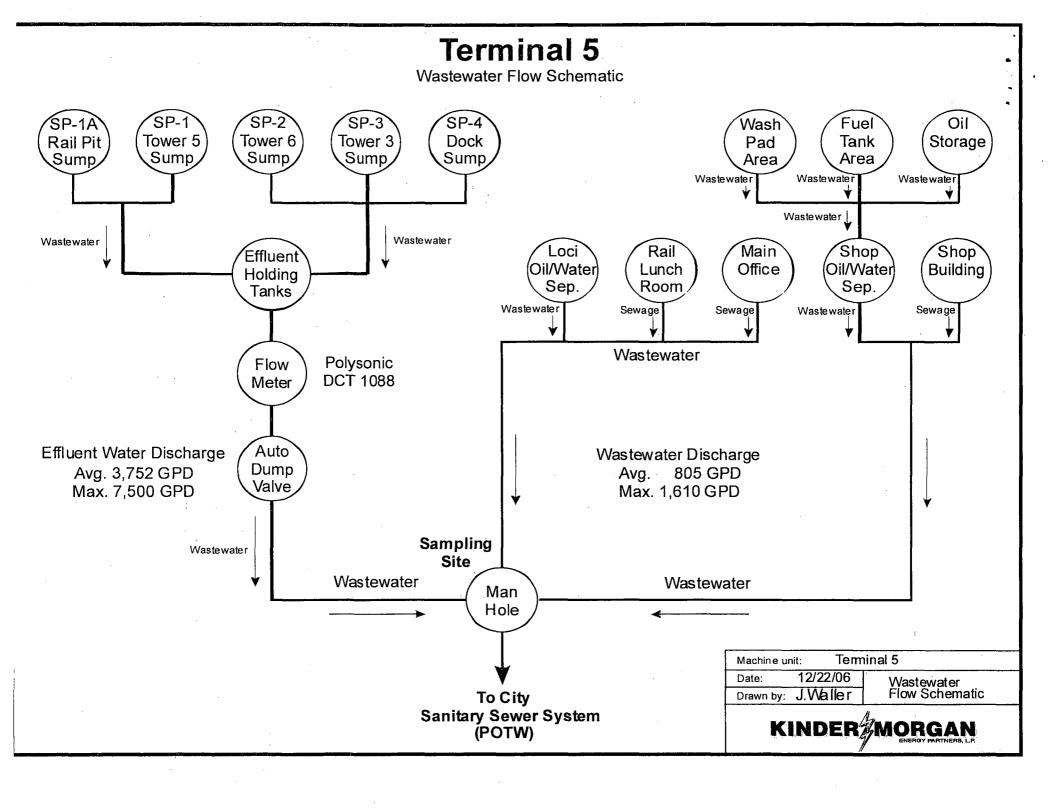
PROCESS FLOW DIAGRAM

A Separate drawing should be completed for each major business activity.

A line drawing (schematic flow diagram) of each major business activity is to be completed either in the space below or drawn on separate sheet of paper (all sheets should be letter size). Number each process that generates wastewater using the same numbering system as in the building layout or plant site plan shown in the building layout schematic. An example of drawing required is shown below in Figure 1.

To determine your average daily volume and maximum daily volume of wastewater flow, you may have to read water meters, sewer meters, or make estimates of volumes that are not directly measurable.

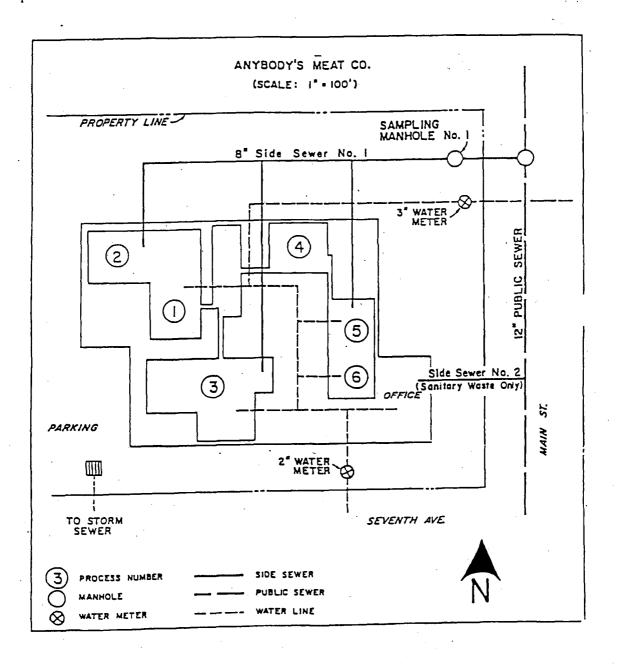


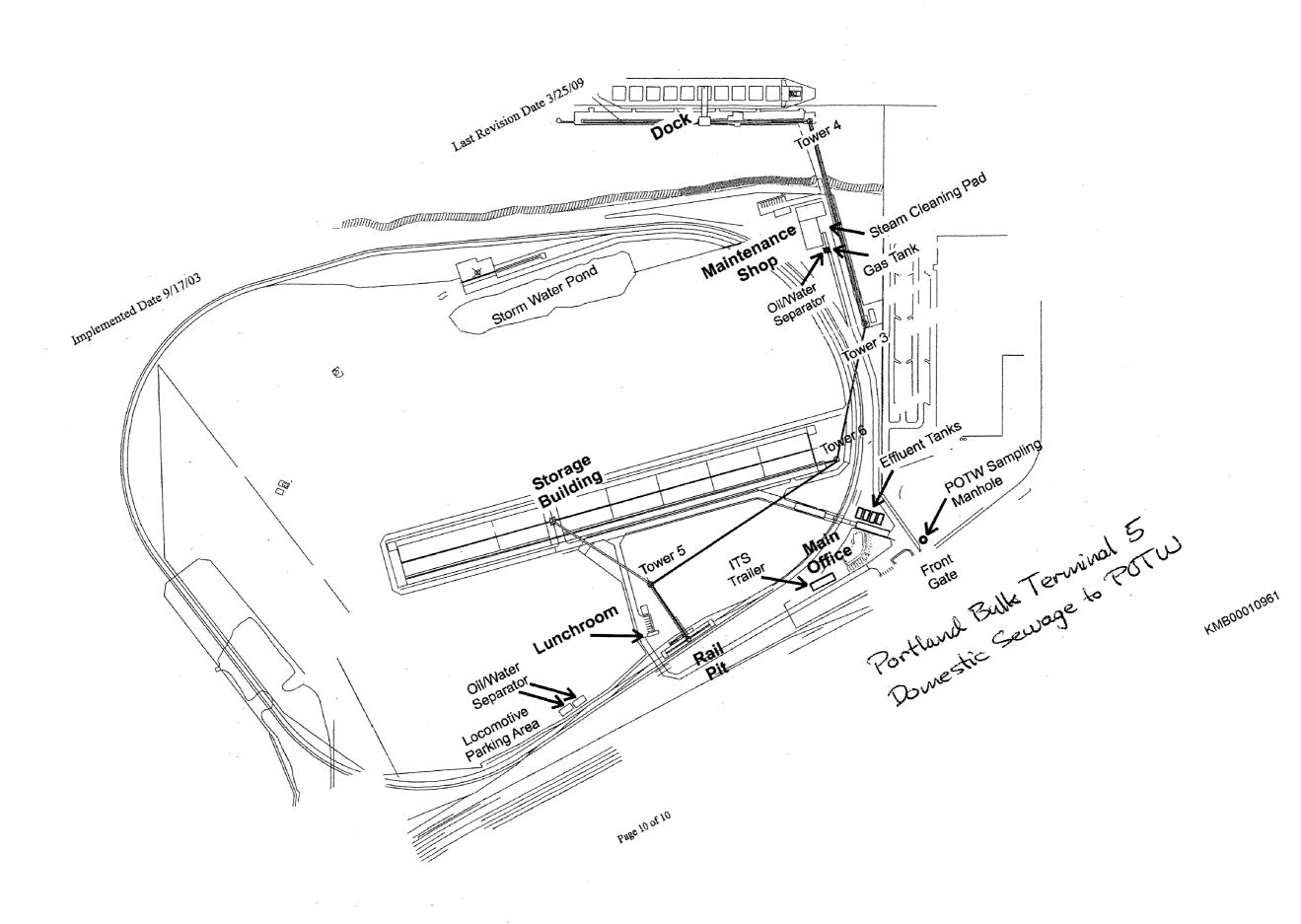


ATTACHMENT C BUILDING LAYOUT

Draw the location of each building on the premises. Show location of all current or planned water meters, storm drains, numbered unit processes (from process schematic(s)), community sewers and each side sewer connected to the community sewers, automatic sampling equipment (current or planned), location of pretreatment processes, treated flows and untreated flows, name and location of pertinent streets. Use flow schematic to indicate process and process discharge in gpd. Number each side sewer and show possible sampling locations (sampling manhole).

An attached blueprint or drawing of the facilities showing the above items may be substituted for a drawing on this sheet. Use the example on the back side of this sheet as a guide.







City of Portland Environmental Services Water Pollution Control Laboratory



6543 N. Burlington Avenue, Portland, Oregon 97203-5452 (503) 823-5600 FAX: (503) 823-5559

T-5 Copy

Environmental Survey
Part II

INDUSTRIAL SOURCE CONTROL DIVISION



Water Pollution Control Laboratory
6543 North Burlington Avenue, Portland, Oregon 97203-5452 Dean Marriott, Director

INDUSTRIAL AND COMMERCIAL ENVIRONMENTAL SURVEY

Part II

The federally mandated Pretreatment Program requires the City of Portland (the City) (40 CFR 403.8(f)(2)), to develop and implement procedures that:

- (1) Identify and locate all possible Industrial and Commercial Users which might be subject to the Publicly Owned Treatment Works (POTW) Pretreatment Program requirements.
- (2) Characterize the type and volume of pollutants contributed to the POTW by the Industrial and Commercial Users as identified under (1) above.

By completing the *Industrial and Commercial Environmental Survey*, Part II, you are helping the City complete its requirements.

Confidential Information

As outlined in 40 CFR 403.14 (a)-(c) and ORS 192.430, any information submitted to the City under the Pretreatment Program requirements may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions, or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the City may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR part 2 (Public Information) and ORS 192.440(2).

Information and data provided to the City under these requirements that is effluent data shall be available to the public without restriction.

All other information, which is submitted to the State or POTW, shall be available to the public at least to the extent provided by 40 CFR 2.302 and ORS 192.440(2).

If, at any time, there is insufficient space to complete an answer, continue your response on a separate piece of paper. Indicate the section and question number next to your response.

INSTRUCTIONS: SECTION A. GENERAL INFORMATION

- 1. Enter the name of the company, *i.e.*, the name of the company legally responsible for this facility.
- 2. Enter the name of the facility, such as the name used on letterhead and/or correspondence or advertising.
- 3. Enter the street address where the facility is located.
- 4. Enter the *mailing* address of the facility, if different from the facility street address above.
- 5. Enter the name, title, telephone number, and fax number of the person who is <u>most familiar</u> with the facts reported on this form and who can be contacted by City staff. Generally, this person is the facility's maintenance supervisor or engineer.

INDUSTRIAL AND COMMERCIAL ENVIRONMENTAL SURVEY

Part II

For Industria			
ate Postmarked			
		ed By:	

SECTION A. GENERAL INFORMATION

	Confidential Information - Indicate those secton confidential and your basis for requiring confidential.)		
1	SSA PACIFIC INC (Company Name)		
2	Portland Bulk Telminy	5	· · · · · · · · · · · · · · · · · · ·
3	(Facility Address, Street)	7-5	
	Portland (City)	ORen o A	97203 (Zip Code)
4	(Mailing Address, Street/PO. Box)		
	Portland (City)	Ofta on (State)	47203 (Zip Code)
5.	Provide the name of the person to contact on information	contained in this questionnaire	
	Dostin Wilson (Name)		503 285 4200 (Phone)
	Assistant Managel		503 285 7733 (Fax)

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INSTRUCTIONS: SECTION B. FACILITY TYPE INFORMATION

- 1. Supply the requested information for all commercial activity done at the facility.
- 2. Check the appropriate box(es). If the manufacturing or service activities of your facility are not included in the table, mark other and indicate the activity (or activities) in the space provided. The heading "CFR" is an acronym for the Code of Federal Regulations, the codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The numbers below this heading indicate the part within Title 40 (Protection of the Environment) covering this activity. An asterisk (*) indicates that EPA has proposed regulations concerning those activities.

SECTION B. FACILITY TYPE INFORMATION

1. List all business activities performed on-site. Attach additional sheets as needed.

Business Activity					
Transfer of dry bulk products from silesis to strage building	4491				
to ship. Product handled is primarily potash (potassium chloride)					
other Fortilizers as well as Inorganic products, may occasionally	<u> </u>				
be handled					

2. Check all applicable manufacturing or service activities performed at this facility:

	Manufacturing or Service Activities	CFR		Manufacturing or Service Activities	CFR
[]	Aluminum Forming	467	[]	Meat Products	432
[]	Asbestos Manufacturing	427	[]	Metal Molding and Casting (Foundries)	464
[]	Battery Manufacturing	461		Metal Products and Machinery	438
[]	Builders' Paper and Board Mills	431	[]	Metal Finishing	433
[]	Carbon Black Manufacturing	458	[]	Mineral Mining and Processing	436
[]	Cement Manufacturing	411	[]-	Nonferrous Metals Forming/Metal Powders	471
[·]	Centralized Waste Treatment	437	[]	Nonferrous Metals Manufacturing	421
[]	Coal Mining	434	[]	Oil and Gas Extraction	435
[]	Coil Coating (including Can making)	465	[]	Ore Mining and Dressing	440
[]	Copper Forming	468	[]	Organic Chemicals, Plastics, & Synthetic Fibers	414
[]	Dairy Products Processing	405	[]	Paint Formulating	446
[]	Electrical and Electronic Components	469	[]	Paving and Roofing Materials (Tars and Asphalt)	443
[]	Electroplating	413	[]	Pesticide Chemicals (Formulating & Packaging)	455
[]	Explosives Manufacturing	457	[]	Petroleum Refining	419
[]	Feedlots	412	[]	Pharmaceutical Manufacturing	439
[]	Ferroalloy Manufacturing	424	[]	Phosphate Manufacturing	422
	Fertilizer Manufacturing	418	[]	Photographic Processing	459
[]	Fruits and Vegetables Processing	407	[]	Plastics Molding and Forming	463
[]	Glass Manufacturing	426		Porcelain Enameling	466
[]	Grain Mills	406	[]	Pulp, Paper and Paperboard	430
[]	Gum and Wood Chemicals	454	[]	Rubber Processing	428
[]	Hospitals	460	[]	Seafood Processing	408
[]	Ink Formulating	447	[]	Soap and Detergent Manufacturing	417
[]	Inorganic Chemicals Manufacturing	415	[]	Steam Electric Power Generating	423
[]	Iron and Steel Manufacturing	420	[]	Sugar Processing	409
[]	Landfills and Incinerators		[]	Textile Mills	410
[]	Laundry, Industrial		[]	Timber Products Processing	429
[]	Laundry, Linen		[]	Transportation Equipment Cleaning	-
[]	Leather Tanning and Finishing	425			

INSTRUCTIONS: SECTION C. FACILITY OPERATIONS AND WATER USE INFORMATION

- 1. Enter the approximate month and year that operations began, or are proposed to begin.
- 2. Circle the days per week that your facility conducts business.
- 3. Indicate the number of hours per day that your facility conducts business.
- 4. Indicate the *shift start time* for each work shift at your facility. Consider each shift on the basis of normal starting time with shifts possible in a 24-hour period; only periods of production or process operation, including cleanup procedures, are to be considered as shift work.

Enter the average *number of employees* that work each shift. The number of employees per shift should include office workers, executives, watch persons, etc. whose hours coincide with the times of production shifts. Add the number of employees per shift and then add all shifts to obtain total employment.

Enter "NA" (or Not Applicable) for each item that does not apply to your facility.

- 5. Indicate, by checking the appropriate box, if the production at your facility is seasonal, such as food processing facility performing canning operations during harvest time.
 - If "Yes" is checked, complete as requested.
- 6. Specify the number of days that your facility conducted business during the last calendar year.
- 7. Indicate by checking the appropriate box, if scheduled shutdowns occur at your facility, such as seasonal production or shutting down a production line over a holiday for scheduled maintenance and cleaning.
 - If "Yes" is checked, complete as requested.
- 8. Water Service: List the supplier and your account number(s). List all account numbers related to the water sources. *Example*: Powell Valley Road Water District, #M900891234.

Surface Water: Includes any and all water from rivers, streams, ponds, lakes, etc.

Well Water: No explanation required.

Other sources: Specify if water is obtained from other sources not listed above, such as water that is trucked-in.

City of Portland water bills are in units of a hundred cubic feet (ccf) where one ccf (hundred cubic feet) = 748 gallons. Use the following equation for calculating the average gallons per day (gpd) for water supply information:

Average gpd = Total water usage in the last 12 months (in ccfs) X 748

Total number of operating days in 12-month period

Note: Continued on the following page

		M	n 1997	
	pegan or will begin at this fa			
Circle days per week of	operation: Sun Mon.	Tues. Wed	hurs. Fr	i. Sat
Circle hours per day of	operation: 8 10	12 16 24	Other (spe	ecify): Hours o
Provide the following sl	ift information:	•	and rail	end on vessel
Shift	Shift Start Time	No. of Emplo	yees	
1st	8:00 AM	14		,
2nd	(ios Pm	5		
3rd	3:00 Am	<u> </u>		
	Total No. Employees	23		ŕ
Domestic Us	se = 35 gallons/employee	805		
Is the business or proj	oosed activity continuous th	roughout the year	Yes	s [/ No
·	or seasonal?	Yes [] No) []	·
Indicate periods of max	imum and minimum produ	ction:		
Maximum:				
			2	
•	eration or production for th		•	
Do scheduled shutdow		No [X] If		period(s):
From:	To:	From:	To:	<u> </u>
Provide the applicable	water supply information re	equested below:		
			Account	Usage (GP)
	Water Supply Source(s)		Number	
Water Service, (#1):	City of Portland		18-967-540-0	3998GPD
Water Service, (#2):	City of Portland C	3	<u>3-967-550 +</u>	
Water Service, (#3):		29	8-466-690-0	
Surface Water:				
Well Water:	· · · · · · · · · · · · · · · · · · ·			
Other (specify):	<u> </u>			
*	Nash down operation 100 gpd, wash downs - but are scheduled even Page 4 of 13	is may use T	otal Daily Use	3,998
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	hat an acheduled even	ts.	18	
weryday	- " Page 4 of 13	3 .		Rev. 7/23

- 9. This table tracks the use of water throughout your facility and the ultimate fate of the water. Enter the total water usage calculated in Section C Question 1. Complete the table listing the amount of incoming water for each item and the amount that is discharged for each listed item.
 - Indicate what volume of water for each item is discharged to the sanitary sewer, the storm sewer, a combined sewer, or to other, such as on-site or off-site disposal.
 - Check the appropriate Raw Water Treatment column. This is to identify if the incoming water is chemically treated prior to use. Some manufacturing processes require treatment of raw (or incoming) water before the water can be used in the process. These include dechlorination, ion exchange, etc.
 - If the exact amount of water is not known for each item, then estimate the amount as best as possible and note how the estimation is determined.

Enter "NA" (or "Not Applicable") for each item of water use information that does not apply to your facility.

<u>Domestic Use</u>: is any wastewater generated from dwellings, office buildings or institutions including, but not limited to, wastes from bathrooms, residential laundries, showers, and normal sink usage. It is not water used in any commercial or manufacturing capacity.

<u>Contained in Product</u>: is any water that is a component of the product(s) manufactured at your facility.

<u>Process Water Discharged</u>: is any water used in an industrial or commercial process that, as a result of process usage, contains pollutants. These pollutants may be liquid, solid or gaseous substances or combinations. Pollutants can result from any process of industrial manufacturing, commercial food processing, commercial food preparation (restaurants), business, mobile washers, agriculture, trade or research.

An <u>Air Compressor</u>: may include the discharge of single past cooling water from the compressor head and compressor condensate drain water.

An <u>Air Pollution Control Unit</u>: is any device used to control air emissions. For example, a wet scrubber using a water spray to remove solid, liquid, or gaseous contaminants from a gas stream. The water spray performs this removal by dissolving, trapping or chemically reacting with the contaminant.

<u>Backwash Water</u>: is water used to clean filters or ion exchange units by passing a strong flow of water counter to the direction of normal flow. This action removes solids and other small particulate contaminants.

Boiler Feed: is the clean feed water to a boiler unit.

<u>Boiler Blowdown</u>: is the water used to remove used boiler water containing concentrated solids or treatment chemicals. Feed water replaces that water sent to the drain.

Note: Continued on the following page

9. Check all that are applicable to your facility and provide the appropriate flow information.

		Water nent ^		Discharged				
Water Use	Flow (gpd)	Yes	No	Sanitary Sewer	Storm Sewer	Combined Sewer	On- Site ^B	Off- Site ^c
Domestic Use	805		<i>X</i>	805				
Contained in Product								
Process Water Discharged								
Air Compressor								
Air Pollution Control Unit								
Backwash Water								
Boiler Feed/Blowdown								
Cooling Water, Contact								
Cooling Water, Non-contact								
Cooling Tower/Bleed-off			-					
Equipment Washing			-					
Irrigation								
Plant Cleanup/Washing	3,193			3193				
Other (specify):	[-		-				
Total (gpd)				· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			`

Total (gpd) 3,498

NOTES:

A.	If raw water treatment is used,	list the process(es)	employed and ho	w the treatment	residuals or
	regenerants are disposed or dis	scharged.			

______*N/A*

B. Describe how this water is handled on-site. For example: flows to an evaporator, a drain field, etc.

washnater is collected in maskmater holding tanks (Previous Apports noted then
15 "effluent tanks") wash-water is disharged duily at piwen. 4w der between 2,500 \$ 3,500 gpd

C. Describe how this water is handled off-site. For example: it is reclaimed, recycled, etc.

wash water is discharged to the City of Portland sewer system.

<u>Contact Cooling Water</u>: is the water used to cool a process item, such as cutting water, quench tanks, rinse tanks. It is water that comes into contact with a process or a product and may be contaminated so that is cannot be reused or recycled without treatment.

<u>Non-Contact Cooling Water</u>: does not come in direct contact with any portion of the process or product. Mainly used in process heat exchangers.

<u>Cooling Tower Water</u>: is clean water fed to a cooling tower. [See also boiler feed water.]

<u>Cooling Tower Bleed-off</u>: is the water used to remove cooling water containing concentrated solids or treatment chemicals. Feed water replaces that water sent to the drain. [See also boiler blowdown.]

<u>Equipment Washing</u>: is water used in the maintenance and cleaning of production equipment at the facility.

<u>Irrigation</u>: is water used for landscape maintenance.

<u>Plant Cleanup/Washing</u>: is water that is used in the maintenance and cleaning of the facility, such as vehicle cleaning, facility washdown (inside and outside), etc.

Other: accounts for water uses not listed above.

- A. If "Yes" has been checked for raw water treatment, list the process(es) in use or proposed and the chemicals to be added during treatment, in the space provided or on a separate sheet of paper.
- **B.** If checked for on-site discharge or disposal, detail what is being discharged or disposed on-site, listing the process and the waste or regenerant involved.
- C. If checked for off-site discharge or disposal, detail what is being discharged or disposed offsite, listing the process and the waste or regenerant involved, the transporter, and the destination.

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Page 6 of 13

- 10. Check the appropriate box and complete as requested.
- 11. Complete as requested.

INSTRUCTIONS: SECTION D. FACILITY MATERIAL STORAGE AND PROCESS INFORMATION

1. Many facilities store or produce chemicals in bulk quantities, larger than 25 gallons. These quantities pertain to chemicals that are routinely stored at this facility which are used, produced, distributed or otherwise handled. The twenty (20) most frequently reported hazardous substances are:

Acetone	Diesel fuel	Lacquer thinner	Propane
Acetylene	Gasoline	Motor oil	Solvent
Antifreeze	Hydraulic oil	Nitrogen	Sulfuric acid
Argon	Isopropyl alcohol	Oxygen	Thinner
Chlorine	Kerosene	Paint	Waste oil

The Superfund Amendments and Reauthorization Act (SARA) Title III, also known as the Emergency Planning and Community Right-to-Know Act of 1986(EPCRA), is intended to encourage and support local and state emergency planning efforts. It provides citizens and local governments with information about potential chemical hazards in their communities. SARA calls for facilities that store hazardous materials to provide officials and citizens with data on the types (flammables, corrosives, etc.) and quantities on hand. The inventories for reportable quantities of hazardous substances are filed with the Office of State Fire Marshal under the Hazardous Substance Survey program. You may attach a copy of your reportable quantities report in lieu of completing this table.

SECTION C. FACILITY OPERATION AND WATER USE INFORMATION

10.	Check type(s) of meter(s) in use at your facility. Also indicate the number in use.
	Credit Meter(s): Yes [] No [] Discharge Meter(s): Yes [V No []
11.	If a discharge meter is employed, list the manufacturer and describe the method of its operation, if known:
	Manufacturer: Polysonics
	Description: DCT 1088 Flow Meter
	SECTION D. FACILITY MATERIAL STORAGE AND PROCESS INFORMATION

1. Complete the table below for all chemicals greater than 25 gallons stored and used on-site. If you are required to provide a report to the Portland Fire Bureau or the State Fire Marshall's Office, per the Superfund Amendments and Re-authorization Act of 1986 (SARA Title III) requirements, you <u>may</u> submit a copy of this report in lieu of completing this table. <u>Attach additional sheets as needed</u>.

Chemical Name	Amount Stored	Stora [Check as ap Inside		SARA Title III? (Y/N)
Example: Trichloroethene	30 gallons	1		Y
Attached : State fire Marsha	<u> </u>			
Harm-lous Substante				
Attached: State fire Marsha Hazon-Jour Substante Information Survey-2006	I ·			
				<u> </u>
:		<u> </u>		
		· ·	· · · · · · · · · · · · · · · · · · ·	
·				

INSTRUCTIONS: SECTION D. FACILITY MATERIAL STORAGE AND PROCESS INFORMATION

- 2. Check the appropriate box.
- 3. Complete the table as requested using the given example as a guide. List all raw materials used in any of the manufacturing processes. List also where the material is stored prior to use, and the daily average amount used.
- 4. Complete the table as requested using the given example as a guide. List all of the products manufactured at this facility.

2.	Do you have floor drains in manufacturing or storage areas?	Yes [·]	No []
----	---	-----------	--------

3. List the raw materials utilized or stored on site. Indicate quantity using appropriate units:

Raw Materials			Stor Check as ap inside	Daily Average (units)	
Example:	3/4" steel tubing			1	1,500 pounds
					·
	N/A				
				,	

4. List each product manufactured at this facility, indicating the appropriate production units:

Products	Units/Time
Example: Bicycle handlebars	150 per day
N/A	
	·

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INSTRUCTIONS: SECTION E. FACILITY PROCESS WASTEWATER INFORMATION

1. Check all wastewater characteristics that apply.

High strength waste is any waste that contains organic or inorganic, dissolved or suspended particulate matter in excess of that which would be found in domestic waste water, such as food processing waste, brewery waste, restaurant waste, etc. Some of these waste streams may contain a high biochemical oxygen demand (BOD), chemical oxygen demand (COD), or high suspended solids (TSS).

2. If no pretreatment systems are used by your facility, indicate this in the space provided.

Indicate which pretreatment system type(s) are used to treat your waste stream and indicate the design capacity for all pretreatment systems.

SECTION E. FACILITY PROCESS WASTEWATER INFORMATION

1. For each product listed in Section D, indicate the general characteristics of the wastewater generated during manufacturing process:

	Wastewater Types			Wastewater Types, Organic wastes
[]	Acids and Acidic Wastes	[]	Alcohols
[]	Alkali and Caustic Wastes	[]	Aldehydes, Ketones
[]	Dyes, Coloring Agents	[]	Benzene and Benzene Derivatives
11	Electroplating Wastes	[]	Ethers
[]	Fats, Grease (animal/vegetable)	[]	Flammable or explosive wastes
[]	Glues	[]	Halogenated Organic Compounds
[]	Hot Wastes (> 140° F)	[]	Organic Acids
[]	Inks, Printing Wastes	[]	Pesticides, Herbicides, Rodenticides
[]	Metal Cleaning and Preparation Wastes	ſ]	Phenol-containing Wastes
[]	Metal Finishing Wastes	[]	Resins, Monomers
[]	Paint, Pigment Wastes (Latex)	ſ]	Solvents, Thinners
[]	Paint, Pigment Wastes (Solvent-based)	[]	Other Organic Chemicals:
[]	Petroleum-based Oily Wastes			
[]	pH level:, unknown []	[]	
[]	Photographic Wastes			Other Wastes:
[]	Pickling Wastes			· .
[]	Radioactive Wastes			
[]	Soaps, Surfactants, Detergents			·
[]	Soluble Oils, Lubricants	[]	High Strength Waste: BOD ₅ , COD, TSS
[]	Waxes	. []	Toxics: Yes [] No [χ] Don't Know []
[]	Solid or viscous material: Yes [] No [X] Do	on't	Kn	ow []
Is th	e facility's wastewater pretreated? [] Yes		Ī	χ No Pretreatment System.
If yes	s, check all that apply:			
[] A	Air Flotation [] Carbon Absorp	ption	n	[] Chemical Precipitation
[](Chlorination [] Evaporation			[] Filtration
[]F	low Equalization [] Grease Trap			[] Grit Removal
[] [on Exchange [] Neutralization	, pH	Co	ontrol [] Oil/Water Separation
	Reverse Osmosis [] Screening/Gri	_		[] Sedimentation
	Solvent Separation			() 20000000000000000000000000000000000
	Biological Treatment, type:			
	Other Chemical Treatment, type:			
[] R	Painwater Diversion or Storage:		:	
[]C	Other, type:	-		
r	Design Capacity of System:			GPD

- 1. Circle all that are appropriate.
- 2. Check the appropriate box.
- 3. Complete as requested.

A Batch Discharge is the controlled discharge of a discrete volume of wastewater for a limited duration.

- 4. Check the appropriate box. If more than 100 Kilograms of any hazardous waste per calendar month is discharged to the sewer, please include the following information for each hazardous waste to the extent such information is known and readily available (attach additional sheets as necessary).
- 5. Complete the table as requested using the given example as a guide. Include all by-products and materials used in or generated from any and all facility processes (attach additional sheets as necessary).
- 6. Circle the appropriate item, more than one if applicable. Include additional information for more than one user or hauler on a separate sheet of paper:

For off-site reuse: of by-products or wastes, complete the requested information.

For off-site disposal: of by-products or wastes, complete the requested information.

For off-site recycling: of by-products or wastes, complete the requested information.

if batch discharges occur or will occur, indicate the following: a. Percent of discharge as batch: b. Percent discharge as continuous: c. Number of batch discharges (# per week) at	. C	ircle the months	of the year when proc	ess was	stewater discharges	s do occur o	r are planne	d to occur:
Are or will the process wastewater discharges be continuous? [] or batch? [] If batch discharges occur or will occur, indicate the following: a. Percent of discharge as batch:		Jan (Feb	Mar Apr May	y Jur	Jul Aug	Sept Oct	Nov (I	Dec
a. Percent discharge as batch: b. Percent discharge as continuous: c. Number of batch discharges discharged to the sanitary sewer: Type of Discharge: discharges discharges discharged to the sanitary sewer: Type of Discharge: discharges discharged to the sanitary sewer: discharges d	2. A	re or will the pro		arges b	e continuous? []	or batch	3 [N	
b. Percent discharge as continuous: c. Number of batch discharges (# per week) c. Approximate volume of a batch discharge: 2,500 7,500 [allons.] Do you discharge any wastes to the public sewers, which, if disposed by other methods, would regulated as a Resource Conservation and Recovery Act (RCRA) listed, or characteristic hazardo waste? [] Yes [] No [] Don't Know If Yes, please describe the wastes discharged to the sanitary sewer: Type of Discharge: [] Continuous [] Batch [] Other Constituent Name Mass in Wastestream (this month) Constituent Name Mass in Wastestream (this month) Constituent Name Mass in Wastestream (this month) List each by-product or waste, identify process source of by-product or waste, indicating the appropriate production units, and check whether the material is reused, sent off-site for disposal, recycled: By-products/Wastes Process Source Daily I verage Reused Disposal Recycled (units) List each by-product or waste, identify process source of by-product or waste, indicating the appropriate production units, and check whether the material is reused, sent off-site for disposal, recycled: By-products/Wastes Process Source Daily I verage Reused Disposal Recycled (units) Confidence of the applicable disposal method and provide the required information. For off-site recycling: Wist Cast Matiat Clearing User's Name of Hauler's Name Phone	3. If	batch discharges	s occur or will occur, i	ndicate	the following:			
c. Number of batch discharges	a	Percent of	discharge as batch:		/O	0%		
c. Approximate volume of a batch discharge: 2,500 - 7,500 [allons.] Do you discharge any wastes to the public sewers, which, if disposed by other methods, would regulated as a Resource Conservation and Recovery Act (RCRA) listed, or characteristic hazardo waste? [] Yes	b	. Percent dis	scharge as continuous:		0	<u>.</u>		
Do you discharge any wastes to the public sewers, which, if disposed by other methods, would regulated as a Resource Conservation and Recovery Act (RCRA) listed, or characteristic hazardo waste? [] Yes	c.	Number of	batch discharges(# per w	reek) at	1 Hours per o	rs discharge)	
regulated as a Resource Conservation and Recovery Act (RCRA) listed, or characteristic hazardo waste? [] Yes	c.	Approxima	ite volume of a batch d	lischarg	se: <u>2,500 -</u> 7,500	;allons.		
If Yes, please describe the wastes discharged to the sanitary sewer: Type of Discharge: [] Continuous [] Batch [] Other Constituent Name Mass in Wastestream (this month) Concentration in Wastestream (next 12 months)	re	egulated as a Re	e any wastes to the presource Conservation	ublic so and Re	ewers, which, if di ecovery Act (RCRA	isposed by a) listed, or	other metho characteris	ods, would tic hazardo
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(this month) (this month) (next 12 months) 5. List each by-product or waste, identify process source of by-product or waste, indicating t appropriate production units, and check whether the material is reused, sent off-site for disposal, recycled: By-products/Wastes	T	ype of Discharge	: [] Continuous	[]	Batch [] Otl	her		
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appropriate production units, and check whether the material is reused, sent off-site for disposal, recycled: By-products/Wastes								
appropriate production units, and check whether the material is reused, sent off-site for disposal, recycled: By-products/Wastes								<u> </u>
Example: Used cutting oil Cutting & sizing 1 pint Used Oils Fair maintenance 3.6 gallors 6. Circle the applicable disposal method and provide the required information. For off-site reuse: West Coast Marine Clearing User's Name or Hauler's Name (units) 1 pint V See To part of the size	a	ppropriate produ	duct or waste, ident action units, and chec	tify pro	ocess source of b her the material is	y-product s reused, se	or waste, i	ndicating to or disposal,
6. Circle the applicable disposal method and provide the required information. For off-site reuse: West Coast Marine Cleaning User's Name or Hauler's Name Phone	Ву	-products/Wast	es Process Sou	ırce		Reused	Disposal	Recycled
6. Circle the applicable disposal method and provide the required information. For off-site reuse: West Coast Marine Clearing User's Name or Hauler's Name Phone	Exar	nple: Used cutting	g oil Cutting & siz	zing	1 pint			1
6. Circle the applicable disposal method and provide the required information. For off-site reuse: West Coast Matine Cleaning User's Name or Hauler's Name For off-site recycling: Phone	Use		Equip mainte	nance	3.6 gallon		V	
For off-site reuse: West Coast Marine Clearing User's Name or Hauler's Name For off-site recycling: 360-696-3362 Phone	-	<u>, , , , , , , , , , , , , , , , , , , </u>			 			
For off-site reuse: West Coast Marine Clearing User's Name or Hauler's Name For off-site recycling: 360-696-3362 Phone		Circle the empl	licable diaposal method	d and n	rouide the required	Linformatio	'n	
User's Name or Hauler's Name Nest Coast Marine Cleaning User's Name or Hauler's Name Phone	0.			andp	vide the reduired		-	
Po light Vancour Washington		+ coast Mac	ine Cleaning	.	3(20- 69 Phone		₹
Mailing Address, Street/PO Box City State Zip Code	— Mailir	PO ng Address, Street/PO	CIGUY OBOX	<u></u>	Vancey	ver - W	tate 2	Zip Code
DEQ permit number: WAO 988 479 440 Page 10 of 13 Rev. 7/23/21	DEQ 1	permit number:	WAD 98847	9 440) .£10 ·	· · · · · · · · · · · · · · · · · · ·		D

INSTRUCTIONS: SECTION G. OTHER WASTES INFORMATION

- 1. a) Check the appropriate box(es) indicating the number of each type in use on-site.
 - b) Check the appropriate box(es). If "Other," provide the information as required.
 - c) Complete as requested. If "Other," provide the information as required.
 - d) If a mobile cleaning services are used, complete the requested information.
- 2. Check the appropriate box.

If equipment or vehicles are serviced on-site describe how, where, and by whom the wastes generated are disposed.

3. If "Yes," check the appropriate box. If "Other," describe how, where, and by whom the remediated groundwater is handled for disposal.

Note: Continued on the following page

SECTION G. OTHER WASTES INFORMATION

1.	Chec	k all that apply:
	a).	Equipment or vehicles used on-site. Indicate the number in use:
	٠.	Fork lifts [/ #_ 3
		Tractors [] # Other (specify) [X] 80 manlift
	b).	Cleaning of equipment or vehicles:
		On-site [1 Off-site [] Cleaned by facility staff [] Mobile cleaning service [1/2]
	c).	Washwater discharged to: Sanitary sewer [] Storm sewer [] 100% recycled []
	•	taken off-site [] Other (specify) []
2.	Chec	k all that apply:
	a).	Equipment or vehicles serviced on-site. Indicate the number in use:
		Fork lifts [] # Cranes [] # Trucks [] #
		Tractors [] # Other (specify) []
	b).	Mobile services used? Yes [✓] No [] Services done: Inside [] Outside []
		Describe your disposal of used oil, steam cleaning wastes, anti-freeze, or other wastes: est Coast Marine Chaning is contracted to dispose of all the Cused oil etc.) (See into on fage 10 of 13. From #6)
	•	
	11 - 1,	
3.	Do yo	ou have an ongoing groundwater remediation on site? Yes [] No [Y
	Reme	diated groundwater is discharged to the:
	.·	Sanitary sewer [] Storm sewer [] Other (specify) []
		
	:	N/A

Page 11 of 13

INSTRUCTIONS: SECTION G. OTHER WASTES INFORMATION

4. Total facility area - includes all property at this facility.

Roof area - includes all roofs.

Parking lots - include paved and concreted areas, excluding graveled areas.

Other impervious areas - includes any area not included above that prevents stormwater from percolating or absorbing into the ground.

Indicate whether stormwater from each of the above sources is discharged to:

- A Portland storm sewer in a combined sewer area where domestic wastes from toilets, etc. combine with stormwater.
- A Portland storm sewer in a separated sewer area where domestic wastes from toilets, etc. do not combine with stormwater.
- On-site disposal systems may include, but are not limited to, dry wells, soakage trenches, water quality ponds, etc.

Use the following equation to calculate the average daily volume for each stormwater source. Annual rainfall is assumed to be 36 inches/year:

Stormwater volume (average gpd) = Impervious Area (in ft²) X 0.0615

- 5. Provide the information requested. If *Not Applicable* state that in the space provided.
- 6. Check the appropriate box.
- 7. Check the appropriate boxes. Complete as requested.

4. Provide the applicable information requested below:

			Discharge to:			
Stormwater Sources	Area (sq. ft.)	Combined Sewer	Storm Sewer	Sanitary Sewer	On-site Disposal	Average (daily gpd)
Total facility area	100 acres					
Roof area	333,600	,		xi ·	X	unknown
Parking lots (paved/concrete)	250,000 est			* <u>.</u> t	X	
Other impervious areas	283,751				χ	V.

5. List all Environmental control permits held for or issued to this facility:

Type of Permit	Permit Number	Date Issued	Date Expires
NPDES Permit(s)	#78613	6-1-2007	(,130/1A
Air Discharge Permit	±26 - 3071	1-18-05	12-1-11
RCRA/EPA Permit	N/A		
Other (specify)	N/A		

6.	Does this facility have a c	urrent, written spill contingency plan?	Yes [🗸	No []
7.	Are expansion plans sche	duled within the next three years?	Yes [M	No [1
	If Yes, check the appropri	ate box(es) for your facility's expansion plans:		
	Add New Products []	Same Products, additional capacity []	Expand Current Fa	cility [🖊
	New Facility []	Relocate: [] within Portland [] outside	de of Portland []	

This form shall be signed by a Responsible Corporate Officer, a general partner or by a duly authorized representative.

40 CFR 403.12(I):

Signatory requirements for industrial user reports. The reports required by paragraphs (b), (d), and (e) of this section shall include the certification statement as set forth in 403.6(a)(2)(ii), and shall be signed as follows:

- (1) By a responsible corporate officer, if the Industrial User submitting the reports required by paragraphs (b), (d) and (e) of this section is a corporation. For the purpose of this paragraph, a responsible corporate officer means (I) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- (2) By a general partner or proprietor if the Industrial User submitting the reports required by paragraphs (b), (d) and (e) of this section is a partnership or sole proprietorship respectively.
- (3) By a duly authorized representative of the individual designated in paragraph (I)(1) or (I)(2) of this section if:
- (3) (I) The authorization is made in writing by the individual described in paragraph (I)(1) or (I)(2);
- (3) (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and
- (3) (iii) the written authorization is submitted to the Control Authority.
- (4) If an authorization under paragraph (I)(3) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of paragraph (I)(3) of this section must be submitted to the Control Authority prior to or together with any reports to be signed by an authorized representative.

Photocopy the completed survey form for your records and return the original survey to:

Industrial Source Control Division
City of Portland Environmental Services
Water Pollution Control Laboratory
6543 N. Burlington Avenue
Portland, OR 97203-5452

RESPONSIBLE CORPORATE OFFICIAL CERTIFICATION

You have completed the Industrial and Commercial Environmental Survey, Part II. Sign and return this questionnaire to the Industrial Source Control Division.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. [40 CFR 403.6(a)(2)(ii)]

This certification is to be signed only by the Responsible Corporate Official as per 40 CFR 403.12(l)(1) {e.g. the president, treasurer, vice-president, general partner, or sole proprietor of the facility}.

Responsible Corporate Official:

Mark Knodsen
(Print name here)

(Title)

(Signature)

(Phone)

Date



ENVIRONMENTAL SERVICES

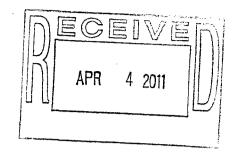


Water Pollution Control Laboratory

6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Dan Saltzman, Commissioner • Dean Marriott, Director



Brent McMullin Kinder Morgan Willbridge Bulk Terminals 1610 C Street Ste. 205 Vancouver, Wa 98663



Dear Mr. McMullin:

Re: Wastewater Discharge Permit for Kinder Morgan Bulk Term #5

Thank you for notifying the City of Portland Bureau of Environmental Services of the change in ownership regarding Kinder Morgan Bulk Terminal #5.

Unfortunately due to the change in ownership, a new Environmental Survey II and Permit Application must be filled out and submitted prior to the new ownership change.

Your current Wastewater Discharge Permit #400.132 was issued to your specific facility and cannot be transferred by the industrial user.

I have included with this letter an Environmental Survey II, Permit Application and a Signatory Authority form for you and/or new management to complete.

Please complete and submit these forms to your BES Permit Manager by May 31st, 2011.

If you have any further questions, please feel free to call me @ 503-823-9779

Sincerely,

Biola Cruse Permit Manager

Industrial Source Control Division



Kinder Morgan Terminals Inc.
Portland Bulk Terminals, L.L.C.
Terminal 5
15550 N. Lombard Street
Portland, OR 97203
(503)285-4200

Date: 29 August 2008

To: Biola Cruse, City of Portland Bureau of Environmental Services

From: Neil Maunu, Assistant Terminal Manager

Subject: Wastewater Discharge System Improvements

Biola,

Since the increase of the Terminal's Wastewater Discharge Permit Limitations changed last month from 1,721 pounds to 3,500 pounds per day, we have made the following improvements to our effluent system. These changes have been very beneficial to the terminal.

- 1) We installed improved flow meters that accurately measure down to several gallons per minute. This allows us to discharge at much lower flow rates over longer periods of time with the best instrumentation accuracy available and keeps the effluent from slug loading the sanitary sewer system. In order to install these meters we made some minor piping changes to accommodate.
- 2) Our TDS meters are the same as before. We now take the input from the conductivity meter and with the programming of a TDS curve (much like that of T-4's system) we can accurately determine how many pounds per gallon we are discharging. We then have a real-time running total of how many pounds of TDS we discharge daily. This value triggers when we stop discharging for the day.
- 3) Our new electric control valve will automatically adjust the flow to maximize the amount of TDS we discharge while still flowing for the maximum period of time. (For example if one of our tanks has a higher conductivity reading, that reading triggers the control valve to restrict the rate of discharge so we meet our set limit over our full time period. If the conductivity is lower, we increase our discharge rate, with more effluent, but still maintain the same amount of TDS over the same time period.) This is a vast improvement over the previous method.

Our system has been programmed to discharge 21 hours a day from 12:00pm to 9:00am. The down time will be used for maintenance, meter reading, and setting up any testing/monitoring

15550 N. Lombard

Portland, OR 97203

Phone 503-285-4200

Fax 503-285-7733

equipment. This improvement prevents batch discharges into the city sewer system, whereas we previously discharged at 100 to 200 gallons per minute for approximately 30 minutes, we now will discharge consistently between 4 and 8 gallons per minute for 21 hours.

We are erring on the side of caution and initially setting our TDS discharge limits at 2,200 pounds per day. As our test results come back from Test America and confirm that our instrumentation numbers match what the titration results show, then we will increase our internal limits. As a general rule, we find that we discharge approximately .5 pounds of TDS per gallon. The summertime is a good time to test this system as we can begin with a lower set point and still keep our tanks at a low level (fewer wash downs and significantly less rainfall).

Thank you once again for all you've done to help the Terminal in this matter. If you have any further questions please direct them to myself or to Jack Waller at (503)285-4200.

Regards, Neil Maunu

15550 N. Lombard Portland, OR 97203 Phone 503-285-4200 Fax 503-285-7733

The property of the second of CITY OF PORTLAND INDUSTRIAL USER INSPECTION FORM INDUSTRY NAME: SITE ADDRESS: Portland, OR `⊯ Minor **INSPECTION TYPE:** □ Major ☐ Pre-permitting ☐ Other: DESCRIBE THE PROCESS (ES)/OPERATION (S) INSPECTED;/ PRETREATMENT SYSTEM: **CONDITION & OPERATION COMMENTS** needs improvement good Clarifier Oil & Water Separator Π pH adjustment Other Conductive POINT (S) OF COMPLIANCE: CONDITION & OPERATION **COMMENTS** LOCATION/CODE needs improvement 道。第三元·第三元 **CONDITION & OPERATION COMMENTS** RECORDS REVIEW: needs improvement In Compliance? good **ASPP** ☐ Yes ☐ No П □ Yes □ No TOMP ☐ Yes ☐ No PERMIT ☐ Yes ☐ No RECORDS **FACT SHEET** SLUDGE DISPOSAL: {Attach extra sheets as needed} **DESTINATION PROCESS** 2. 3. GENERAL INSPECTION NOTES: {Attach extra sheets as needed} 200-24 MRS Based on the information obtained from the facility staff, review of effluent monitoring data, and the observed site conditions and operations at this facility on this date; this facility is in compliance with the requirements of its wastewater discharge permit. ∠ Yes □ No, Follow-Up Required. **DUE DATE (S)** FOLLOW-UP ACTION (S): {Attach extra sheets as needed} DATE: NSPECTOR (S): 7/08 DATE:

(Print)
(Signature)

NDUSTRY:

REVIEWED BY:
Industrial Pretreatment Supervisor
CITY USE ONLY

Total Time: hrs. (Include prep /follow-up/review)

SCHEDULE A WASTEWATER DISCHARGE LIMITATIONS

Expiration Date : Permit Number:

3/1/2012 400.132

Page:

A2

MODIFIED

6/25/08

3. The pollutant parameters marked with an asterisk (*) are the pollutants of concern. At a minimum, the permittee is required to monitor for pollutants of concern. All limits are applicable at the point of compliance.

- 4. The permittee is required to meet the <u>MOST</u> stringent limitation listed, denoted in bold type in the above table, when comparing the *Local Limit* column with the *Categorical Limit* column.
- 5. The TDS limitation of 3500 lbs/day, for a 24 hour period, is a permit specific limit developed and implemented in accordance with Bureau of Environmental Services Administrative Rules, Section II (4)). This TDS limit increase is effective as of July 1, 2008.
- 6. The City has Pollutant Prohibitions for certain individual organic compounds that are not amenable to biological treatment or that have a screening value or local limit that is less than the practical method detection level (MDL). Discharges containing concentrations of a prohibited pollutant above the MDL, as listed in Appendix 5, is a violation of City Code and this permit.

Expiration Date: Permit Number:

3/1/2012 400.132 A1

Page: **MODIFIED**

6/25/08

Schedule A WASTEWATER DISCHARGE LIMITATIONS

Listed below are the waste discharge limitations not to be exceeded after **March 7, 2007**. Applicable regulations include Chapters 17.34 (Schedule F of this permit lists the General Discharge Prohibitions) and 17.36 of the Code of the City of Portland. The point of compliance with the discharge limitations shall be sampling manhole 1A.

POC (*)	Pollutant Name	Local Limit Daily Max	Categorical Limit (mg/Lmg/l, lb / off lb)	
		(mg/L)	Daily	Monthly
	<u>METALS</u>			
	Arsenic	0.2		*
	Cadmium	0.7		
	Chromium	5.0		
	Copper	3.7		
	Lead	0.7		
	Mercury	0.010		
	Molybdenum	1.4		
	Nickel	2.8		
	Selenium	0.6		
	Silver	0.4		
*	Zinc	3.7		
	NON-METALS (INORGANICS)			
	Cyanide	1.2		
*	рH	5.0-11.5 su		
*	Total Dissolve Solids	3500 lbs/day		
	NON-METALS (ORGANICS)			
	1,2-Dichloroethane	0.50		
	2,4-Dinitrotoluene	0.13		
	Acrylonitrile	1.00		
	Chlordane	0.03		
	Chlorobenzene	0.20		
	Chloroform	0.20		
	Nitrobenzene	2.00		
	Pentachlorophenol	0.04		
	Trichloroethylene	0.20		
*	Non-polar Oil & Grease	110		
	Total Toxic Organics	see note 7		
	Permit Specific Limits	see note 5		

Notes:

- 1. This schedule may be revised upon written notification by the City to accommodate process changes by the permittee or as determined by the Director of Environmental Services.
- 2. In addition to the limits stated in Schedule A, the permittee shall comply with all other applicable City, State and Federal regulations.

GRP102\CUSTOMER\IU-Kinder Morgan Bulk Term#5\PERMIT\07permit.doc



Kinder Morgan Bulk Terminals, Inc.

ACCIDENTAL SPILL PREVENTION PLAN

Terminal Manager

This plan has been prepared to meet the requirements of industrial wastewater Discharge Permit # 400-132 issued by the City of Portland for discharges from KMBT's Portland Bulk Terminal 5.

Terminal 5 is a dry bulk marine cargo handling facility. Terminal 5 handles primarily "potash" with occasional other products including various fertilizers and non-hazardous materials (see below). Please see attached plan view map of the facility entitled "Sewer Access Map", showing the location of the office, maintenance shop, SGS Trailer, lunchroom, effluent tanks, gas tank, steam cleaning pad, oil/water separators, locomotive parking area, and POTW sampling manhole.

1. Substances handled (or potentially handled):

- A. Petroleum products and hazardous substances (listed in 40 CFR 302.4)
 - Concentrated acids or bases: May be used as needed for neutralization of wastewater prior to discharge to sewer. These products are currently not stored onsite.
 - Lubricants, fuels, oil and used oil (refer to Appendix A for details of the diesel and gasoline fuel tanks)
- B. Non-hazardous bulk materials (not listed in 40 CFR 302.4)

\Box	Potassium	Chloride	("notash")
_	1 Ouissiuiii	Cindinac	(potasii)

- □ Urea
- □ Ammonium sulfate
- □ Potassium sulfate
- □ Phosphate rock
- Di-ammonium and Mono-ammonium phosphate
- ☐ Monocalcium Phosphate ("Triple Super Phosphate")
- Other related fertilizer products
- □ Soda ash (sodium carbonate)

2. Potential points of entry into City sewer system (see attached map entitled "Sewer Access Map"):

- Effluent Tanks
- □ Steam Cleaning Pad outside Maintenance Shop (Oil/Water Separator)
- □ Containment Pad for Gasoline Tank by Maintenance Shop (Oil/Water Separator)
- Oil/Water Separator near Locomotive Parking area.



- Sinks and Toilets in Maintenance Shop, Main Office, SGS Trailer, and Lunchroom
- □ Sampling Manhole at Facility Entrance (Main Gate)

3. Measures to prevent entry of spills into the sewer system:

- □ The 480-gallon, above-ground, gasoline fuel tank is of double wall construction to prevent leakage. The tank is mounted on a concrete secondary containment pad to capture inadvertent drips or spills from vehicle refueling operations. Liquids on the containment pad will drain to an oil/water separator and will discharge to the City sewer.
- □ The 100-gallon portable diesel tank is placed on a movable trailer. Any inadvertent drips or spills during fueling operations are cleaned up immediately using absorbent pads.
- De-greasers and other small quantities of chemicals and paints are stored in metal cabinets inside the maintenance shop that has a concrete base and no access to the City sewer.
- □ Lube oils and greases are stored in drums and smaller containers in a 20' storage container place on a concrete containment pad located adjacent to the maintenance shop. There is no direct access to the City sewer.
- □ Steam Cleaning Pad has a catch basin that drains to an oil/water separator and then discharges to the City Sewer System.
- Acids and bases for pH neutralization are not onsite. Should they be needed in the future they will be stored in secured containment with no access to the sewer.
- Absorbent material is placed under locomotives when they are parked outside the Enviro Pans to catch oil drips.
- Bulk products such as fertilizers and "miscellaneous compounds" are transferred directly to vessels or temporarily stored in the bulk storage warehouse that does not have sewer access points.
- The following "Best Management Practices (BMPs) are used at Terminal 5:
 - □ Safe handling procedures and personnel training (see Attachment 1)
 - □ Indoor storage/secondary containment for fuel, lubricants, degreasers, paints and other miscellaneous chemicals
 - □ Spill kits are available onsite and qualified spill cleanup firms such as NRC Environmental or West Coast Marine Cleaning (WCMC) are available to respond to accidental spills

4. Measures to be taken to contain spills:



See Attachment 2

5. Description of employee training:



This plan is reviewed with all new employees. The plan and spill reporting procedures are also reviewed with all employees on an annual basis. Additionally, the "NOTICE" (Attachment 3) and a copy of this plan are posted in the office, lunchrooms and maintenance shop.

6. Maintenance, Repair, & Cleaning of Equipment:

A proactive, predictive, and preventative maintenance program is in place including daily, weekly, monthly, quarterly, and annual maintenance covering materials handling/storage, structures, and treatment facilities. Detailed records are kept on site and are available for review upon request. In addition, a detailed annual training program covering all aspects of the environmental, health, and safety issues in the terminal has been established and is documented.

7. Recordkeeping and Reporting Procedures:

As noted above, Maintenance and training is documented. In addition, the terminal has an incident reporting procedure and documentation that includes spills, overfills, or leaks.

An annual management review of this Plan is conducted and documented.

In the event of accidental or slug loading, Terminal personnel will immediately notify the city (Attachment 3) and the Terminal Manager will write a formal report and submit it to the City with in 5 days.





Best Management Practices (BMPs) for Kinder Morgan Dock Operations

The following BMPs shall apply at all KMBT Dock Operations. These BMPs must be reviewed with all employees and posted on the bulletin board.

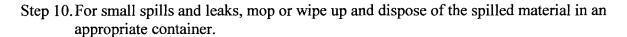
- 1. Contamination of stormwater shall be minimized by regular cleaning/sweeping/vacuuming of docks and work surfaces. Inadvertent spills and releases of cargo products and leaks and drips of oil on the docks shall be cleaned up by means of sweeping and/or vacuuming and/or absorbents, etc. as quickly as practicable. An ample supply of absorbents and cleaning equipment shall be maintained in the dock at all times.
- 2. Limited washdown of the dock and dock equipment is allowed by the DEQ.
- 3. Inadvertent spills and releases of cargo products directly into the River from handling equipment, such as front-end loaders, clamshell buckets, shiploaders, conveyors, etc., shall be minimized to the extent practicable by a) maintaining all equipment in accord with manufacturers' specifications and good engineering practice; and b) frequent cleanup of accumulations of spilled cargo.
- 4. Under no conditions may any material or any waste of any kind be discharged into the River except as allowed under a State or Federal Wastewater Discharge Permit.





MEASURES TO BE TAKEN IN THE EVENT OF A HAZARDOUS SUBSTANCE SPILL

- Step 1. Determine source of spill and, if it can be safely done, shut off valves, conveyors, etc.
- Step 2. Immediately notify KMBT supervisor on duty and warn any personnel in the area.
- Step 3. Isolate area and remove all sources of ignition.
- Step 4. Follow spill reporting guidelines.
- Step 5. Review MSDS for the material to familiarize yourself with handling precautions. MSDS's are located in the front office.
- Step 6. Be sure area is well-ventilated to dissipate gases that may have been created by the spill.
- Step 7. Keep hazardous materials out of sewers, storm drains, surface water and soils.
- Step 8. Use Spill Cleanup Kits as required. Spill Kits are located at: Locomotives, Buggies, C10 & C11, DV-1, C16 Plow, Red Reclaimer, White Reclaimer, Red Tripper, White Tripper, Fuel Station, Maintenance Shop, Rail Clamp, & Shiploader MCC-7.
- Step 9. Use protective equipment as specified in the MSDS for the product spilled.



- Step 11. For large spills, contain spill with absorbent or other non-combustible materials by diking. After containment, shovel or pump hazardous materials and absorbents into DOT-approved drum or other appropriate container.
- Step 12. Contact KMBT supervisor for instructions on proper disposal.
- Step 13. Wash protective equipment thoroughly before securing from cleanup and return same to storage container. Replace any necessary items.
- Step 14. If accidental contact with eyes or shins occurs, follow instructions on the MSDS.





TERMINAL 5 SPILL RELEASE REPORTING GUIDE

Remember: When in doubt – REPORT. There is no penalty for "over-reporting". There are penalties, however, for "under-reporting". Always contact the Terminal Manager at 503-816-5261 and the Regional EHS Manager at (cell) 503-936-5622.

NOTE:

Potash (potassium chloride) and other fertilizers handled at T-5 are NOT Hazardous Substances as defined in 40 CFR 302. Accordingly, spills of these substances do not have to be reported. They must, however, be promptly and thoroughly swept up and disposed of in designated dumpsters.

ON LAND

For any oil or oily product, determine if more than 1 barrel (42 gallons) was spilled.

- If less than 1 barrel went off our property, no reporting is required.
- If 1 barrel or more went off our property, the supervisor must immediately call:

Oregon Emergency Response System (OERS) at 1-800-452-0311 or 503-378-6377



AND National Response Center at 1-800-424-8802

INTO SANITARY SEWER

In the event of a spill of any regulated hazardous material or lubricant that gets into the City of Portland's sewer system, the supervisor on duty must immediately notify the City of Portland Bureau of Environmental Services at:

Monday through Friday, 8:00 am to 4:30 pm - 503-823-7180

After Hours and Weekends - 503-323-3398

INTO WATER

Any amount of oil or oily product that causes a sheen on the water requires immediate reporting to the following agencies:

Oregon Emergency Response System (OERS) at 1-800-452-0311 or 503-378-6377

AND National Response Center at 1-800-424-8802

AND Local US Coast Guard at 503-240-9379 (business hours) -or- 503-240-9311 (after hours)



AIR EMISSIONS

Excess emissions must be recorded with an incident report and entered into the facility Upset Log by the Terminal Manager and forwarded to the Regional EHS Manager.







APPENDIX A



FUEL TANK INFORMATION

GASOLINE TANK

1. Brand Lube Cube by Hoover Group, Inc.

Containment Systems Division

2. Fuel tank capacity 480 gallons, unleaded gasoline, above ground tank

3. Location: South of Maintenance Shop on concrete pad

(refer to Sewer Access Map)

4. Containment Double walled, steel construction w/ventilation.

Concrete pad is designed so that any leaks or spills are

drained to an oil/water separator

5. Safety Certification Meets NFPA-30 Specifications for storage of flammable

and combustible liquids

DIESEL TANK

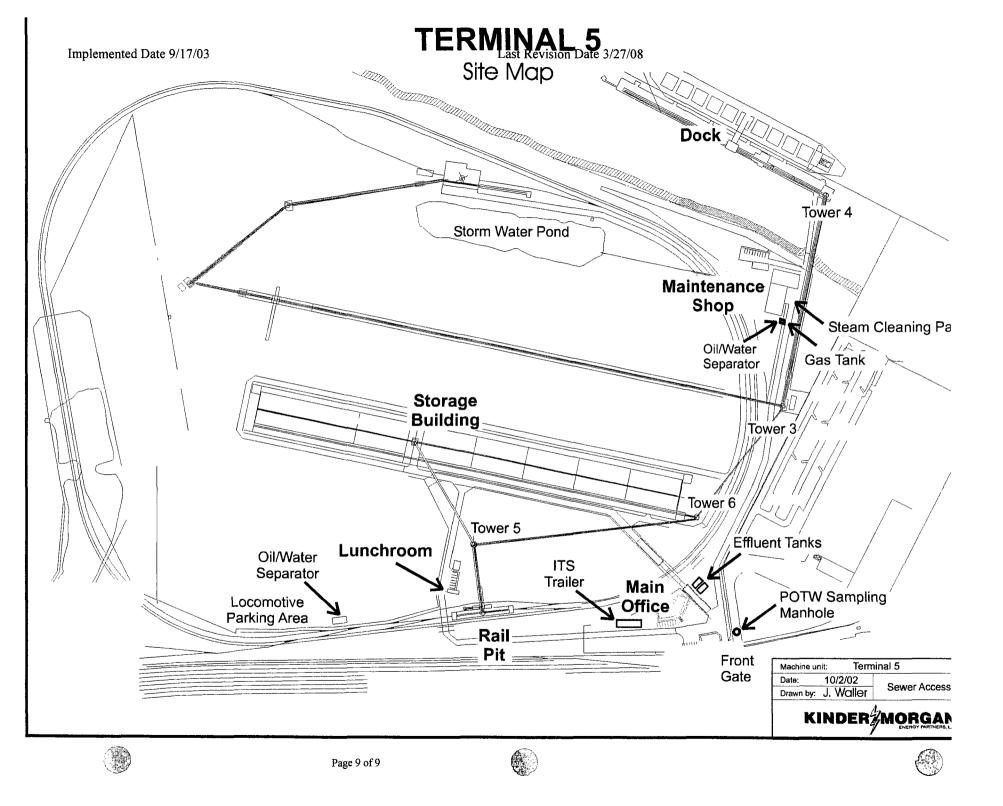


1. Fuel tank capacity 100 gallons, above ground tank

2. Location: One portable trailer

3. Containment None





	1/2	

Date: 3/31/08		Comments / Corrections	Work Order Written or Condition Corrected
Prepared by: Eric Stanton			001100100
Reviewed by:		Allenda .	
DRAVO SYSTEM AND ELECTRICAL SUBSTATION			
ROLL-OVER DUMP BUILDING SECURE	Х		
NOTE ANY CHANGES IN GENERAL CONDITION	X		
SIGNS OF OIL LEAKS FROM TRANSFORMERS OR ON GROUND	X		
SUBSTATION LOCKED AND SECURE	Х		
ALL AREAS CLEAN, NEAT, TIDY AND EVERYTHING IN IT'S PLACE	X		

NOTES AND COMMENTS			
	 		

Superintendent Signature

Forward to the Terminal Manager upon completion.

Date: 3/6/08 Prepared by: G.T. Homson	Acceptable	Comments / Corrections	Work Order Written or Condition Corrected
Reviewed by:			
FUEL STATION NO SMOKING POSTED			
FUEL FILLER HOSE AND NOZZLE			
OIL WATER SEPARATOR			
SPILL KIT AVAILABLE			
FUEL CAGE SECURED			
ALL AREAS CLEAN, NEAT, TIDY AND EVERYTHING IN IT'S PLACE			
- No lenks, Spills, Dips - Nov	3/24pr		
Superintendent Signature	3/6/v8 Date		

Forward to the Terminal Manager upon completion.

1



Kinder Morgan Bulk Terminals, Inc.

ACCIDENTAL SPILL PREVENTION PLAN

Terminal Manager

This plan has been prepared to meet the requirements of industrial wastewater Discharge Permit # 400-132 issued by the City of Portland for discharges from KMBT's Portland Bulk Terminal 5.

Terminal 5 is a dry bulk marine cargo handling facility. Terminal 5 handles primarily "potash" with occasional other products including various fertilizers and non-hazardous materials (see below). Please see attached plan view map of the facility entitled "Sewer Access Map", showing the location of the office, maintenance shop, SGS Trailer, lunchroom, effluent tanks, gas tank, steam cleaning pad, oil/water separators, locomotive parking area, and POTW sampling manhole.

1. Substances handled (or potentially handled):

- A. Petroleum products and hazardous substances (listed in 40 CFR 302.4)
 - □ Lubricants, fuels, oil and used oil (refer to Appendix A for details of the diesel and gasoline fuel tanks)
- B. Non-hazardous bulk materials (not listed in 40 CFR 302.4)
 - Potassium Chloride ("Potash")
 - □ Ammonium Phosphate Sulfate
 - □ Potassium Sulfate
 - Potassium Magnesium Sulfate
 - Other related fertilizer products
- 2. Potential points of entry into City sewer system (see attached map entitled "Sewer Access Map"):
 - Effluent Tanks
 - □ Steam Cleaning Pad outside Maintenance Shop (Oil/Water Separator)
 - □ Containment Pad for Gasoline Tank by Maintenance Shop (Oil/Water Separator)
 - □ Oil/Water Separator near Locomotive Parking area.
 - Sinks and Toilets in Maintenance Shop, Main Office, SGS Trailer, and Lunchroom
 - □ Sampling Manhole at Facility Entrance (Main Gate)

3. Measures to prevent entry of spills into the sewer system:

- The 480-gallon, above-ground, covered, gasoline fuel tank is of double wall construction to prevent leakage. The tank is enclosed in concrete secondary containment designed to capture 110% of the fuel tank capacity. Inadvertent drips or spills from vehicle refueling operations are captured by a concrete containment pad. Liquids on the containment pad will drain to an oil/water separator and will discharge to the City sewer.
- □ The 100-gallon portable diesel tank is placed on a movable trailer and covered. Any inadvertent drips or spills during fueling operations are cleaned up immediately using absorbent pads. A spill kit is located under the cover on the trailer next to the tank. While not being used, the tank is stored next to the used oil tank on a concrete containment pad that drains into the oil/water separator and remains valved off.
- De-greasers and other small quantities of chemicals and paints are stored in metal cabinets inside the maintenance shop that has a concrete base and no access to the City sewer.
- □ Lube oils and greases are stored in drums and smaller containers in a 20' storage container place on a concrete containment pad located adjacent to the maintenance shop. There is no direct access to the City sewer.
- Steam Cleaning Pad has a catch basin that drains to an oil/water separator and then discharges to the City Sewer System. A removeable drain cover/cap is located next to the steam cleaning pad and in case of large spills can be used to prevent the oil/water separator from being overwhelmed.
- □ The 120-gallon, above ground, used oil tank is of double wall construction to prevent leakage. The tank is covered and enclosed in concrete secondary containment designed to capture 110% of the tank capacity. Adjacent to the secondary containment is a concrete pad designed to capture any inadvertent drips, spills, or overflows. This pad drains to an oil water separator and will discharge to the City sewer.
- Acids and bases for pH neutralization are not onsite. Should they be needed in the future they will be stored in secured containment with no access to the sewer.
- Absorbent material is placed under locomotives when they are parked outside the Enviro Pans to catch oil drips.
- Bulk products such as fertilizers and "miscellaneous compounds" are transferred directly to vessels or temporarily stored in the bulk storage warehouse that does not have sewer access points.
- The following "Best Management Practices (BMPs) are used at Terminal 5:
 - □ Safe handling procedures and personnel training (see Attachment 1)
 - ☐ Indoor storage/secondary containment for fuel, lubricants, degreasers, paints and other miscellaneous chemicals

.

 Spill kits are available onsite and qualified spill cleanup firms such as NRC Environmental or West Coast Marine Cleaning (WCMC) are available to respond to accidental spills

4. Measures to be taken to contain spills:

See Attachment 2

5. Description of employee training:

This plan is reviewed with all new employees. The plan and spill reporting procedures are also reviewed with all employees on an annual basis. Additionally, the "NOTICE" (Attachment 3) and a copy of this plan are posted in the office, lunchrooms and maintenance shop.

6. Maintenance, Repair, & Cleaning of Equipment:

A proactive, predictive, and preventative maintenance program is in place including daily, weekly, monthly, quarterly, and annual maintenance covering materials handling/storage, structures, and treatment facilities. Detailed records are kept on site and are available for review upon request. In addition, a detailed annual training program covering all aspects of the environmental, health, and safety issues in the terminal has been established and is documented.

7. Recordkeeping and Reporting Procedures:

As noted above, Maintenance and training is documented. In addition, the terminal has an incident reporting procedure and documentation that includes spills, overfills, or leaks.

An annual management review of this plan is conducted and documented.

In the event of accidental or slug loading, Terminal personnel will immediately notify the city (Attachment 3) and the Terminal Manager will write a formal report and submit it to the City with in 5 days. Effluent discharge from the facility is monitored and flow-controlled, as it is discharged to the City sewer daily. City BES is aware of these routine discharges. Stored chemicals, including fuels, oil, and petroleum products are stored on-site as mentioned above and have no impact on potential slug loading.

Best Management Practices (BMPs) for Kinder Morgan Dock Operations

The following BMPs shall apply at all KMBT Dock Operations. These BMPs must be reviewed with all employees and posted on the bulletin board.

- Contamination of stormwater shall be minimized by regular cleaning/sweeping/vacuuming of docks and work surfaces. Inadvertent spills and releases of cargo products and leaks and drips of oil on the docks shall be cleaned up by means of sweeping and/or vacuuming and/or absorbents, etc. as quickly as practicable. An ample supply of absorbents and cleaning equipment shall be maintained in the dock at all times.
- 2. Limited washdown of the dock and dock equipment is allowed by the DEQ.
- 3. Inadvertent spills and releases of cargo products directly into the River from handling equipment, such as front-end loaders, clamshell buckets, shiploaders, conveyors, etc., shall be minimized to the extent practicable by a) maintaining all equipment in accord with manufacturers' specifications and good engineering practice; and b) frequent cleanup of accumulations of spilled cargo.
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- Step 9. Use protective equipment as specified in the MSDS for the product spilled.
- Step 10. For small spills and leaks, mop or wipe up and dispose of the spilled material in an appropriate container.
- Step 11. For large spills, contain spill with absorbent or other non-combustible materials by diking. After containment, shovel or pump hazardous materials and absorbents into DOT-approved drum or other appropriate container.
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KMB00011009

TERMINAL 5 SPILL RELEASE REPORTING GUIDE

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APPENDIX A

FUEL TANK INFORMATION

GASOLINE TANK

1. Brand Lube Cube by Hoover Group, Inc.

Containment Systems Division

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(refer to Sewer Access Map)

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5. Safety Certification Meets NFPA-30 Specifications for storage of flammable

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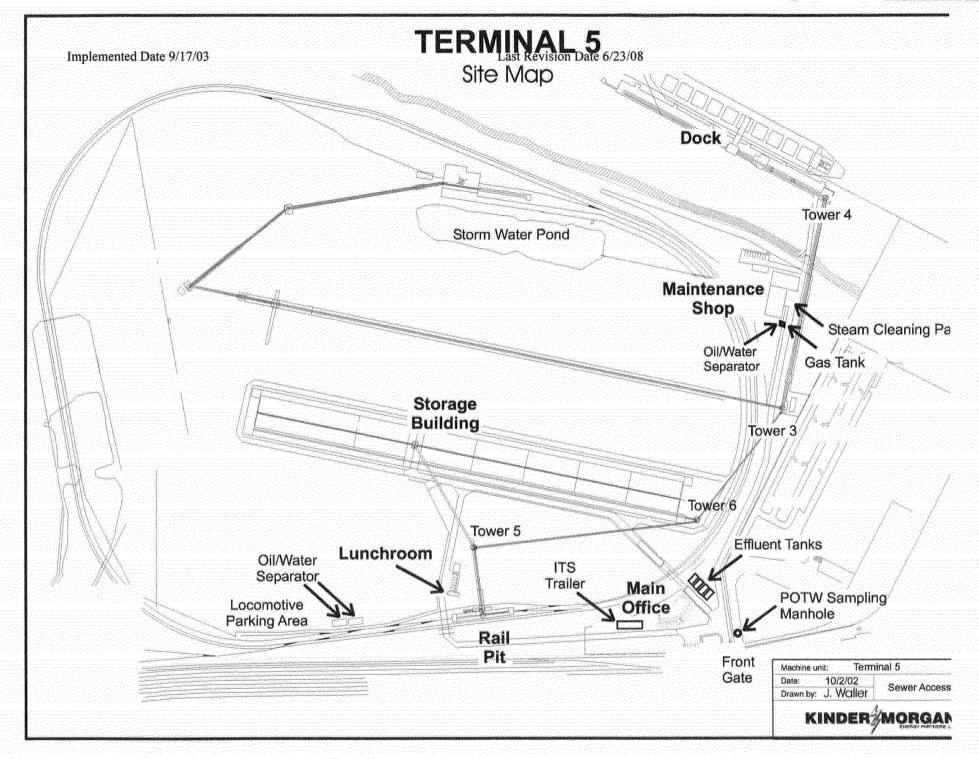
DIESEL TANK

1. Fuel tank capacity 100 gallons, above ground tank

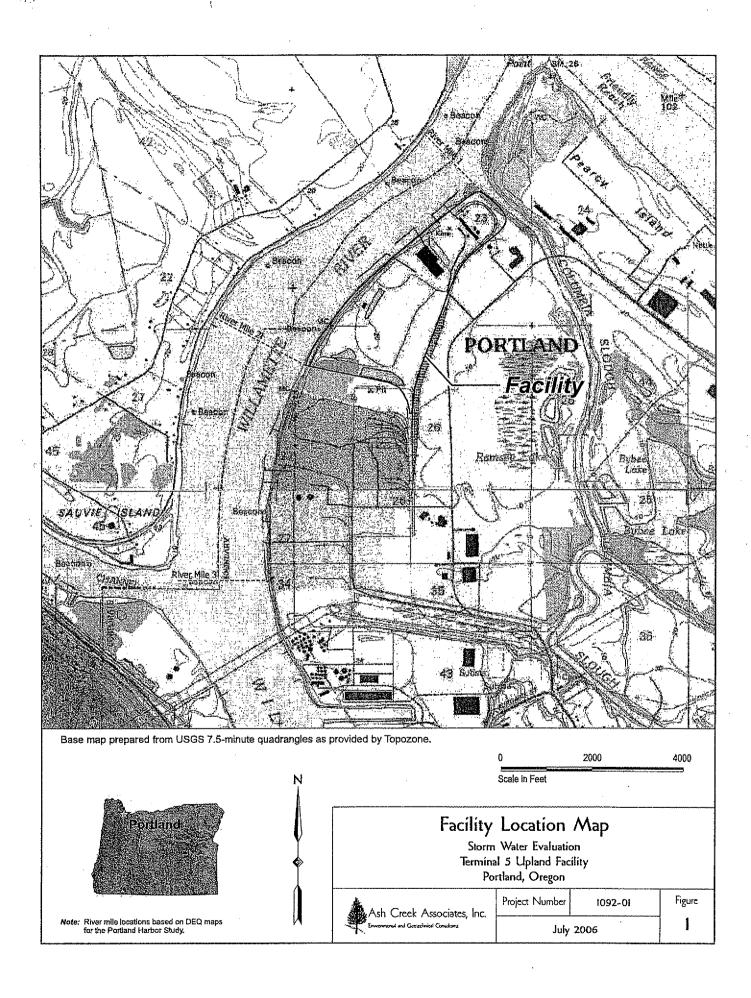
2. Location: On portable trailer, usually stored on concrete pad

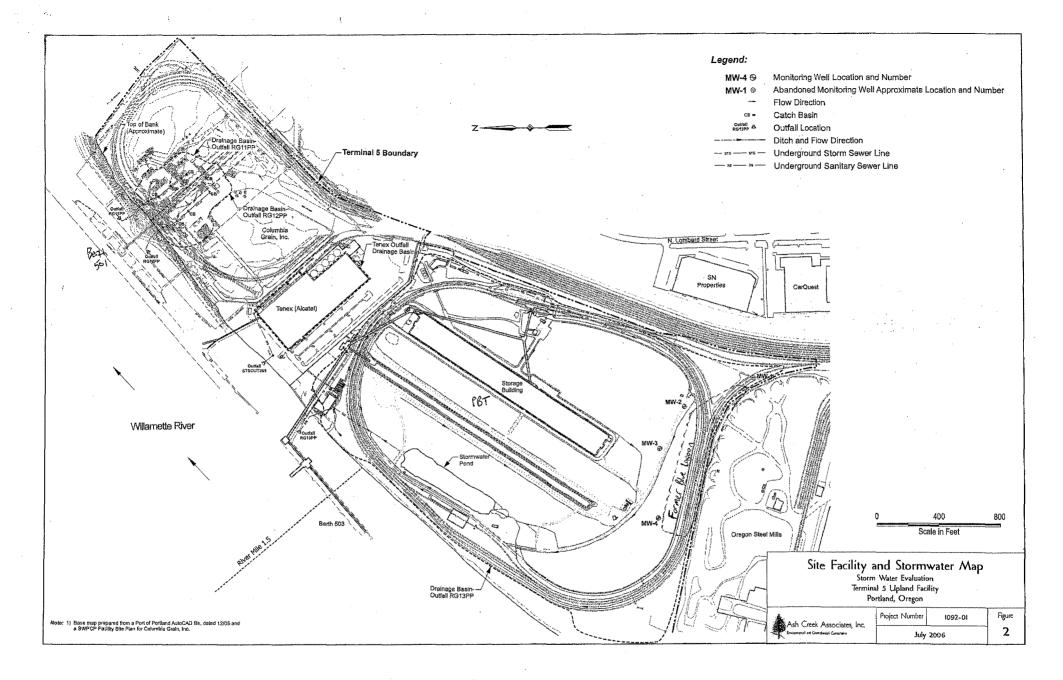
next to used oil tank

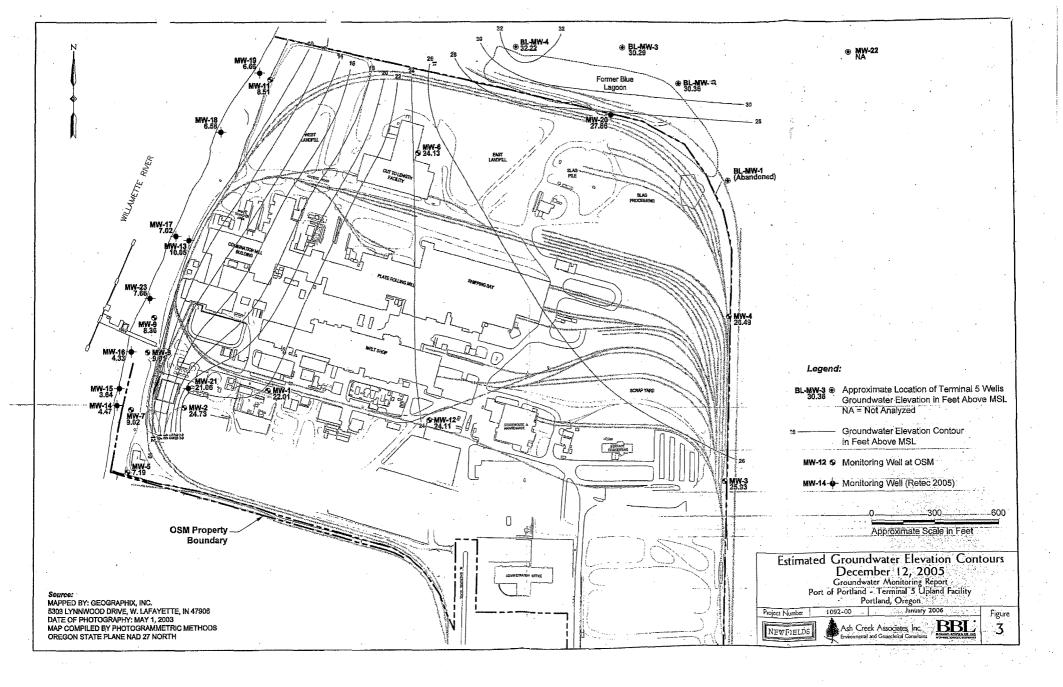
3. Containment None

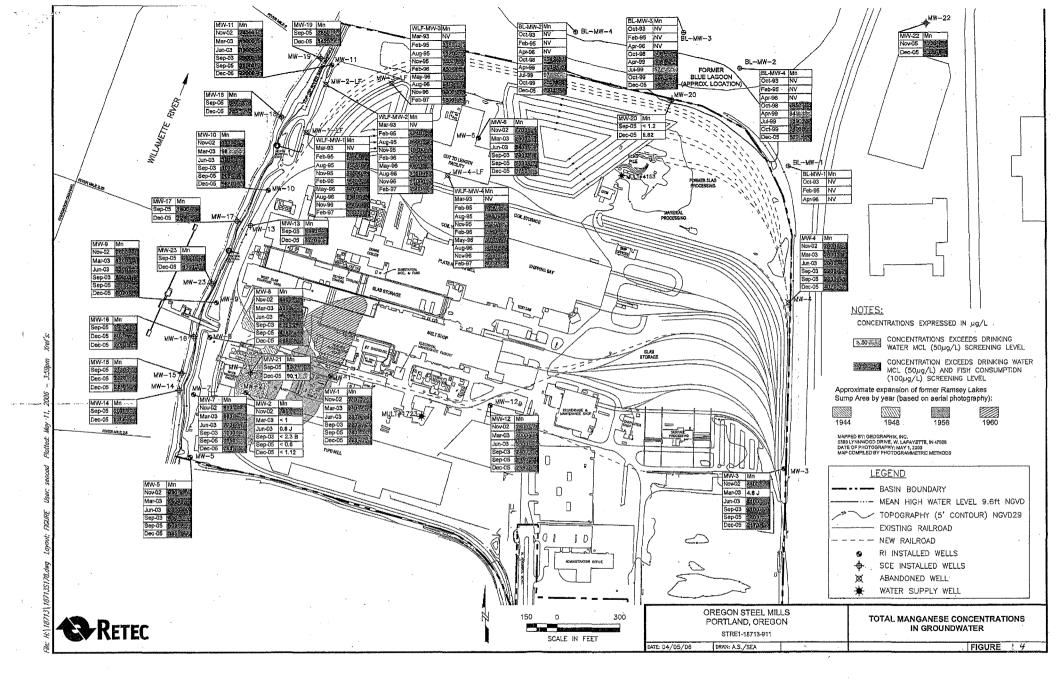


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Department of Environmental Quality

Northwest Region Portland Office 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 (503) 229-5263 FAX (503) 229-6945 TTY (503) 229-5471

October 2, 2008

Kristine Koch U. S. Environmental Protection Agency Region 10 1200 Sixth Avenue, Suite 900, M/S ECL-115 Seattle, Washington 98101-3140

RE:

Source Control Decision Port of Portland Terminal 5

Dear Ms. Koch:

The Oregon Department of Environmental Quality (DEQ) completed review of the Port of Portland Terminal 5 Facility located at 15540, 15550, and 15560 N. Lombard in Portland Oregon. The DEQ has finalized the Source Control Decision (attached), which concludes that the Terminal 5 Facility does not appear to be a current source of Portland Harbor sediment contamination. No additional investigation or source control measures are necessary unless additional information becomes available in the future which indicates that the Terminal 5 Facility is a current source of Portland Harbor contamination.

Please call me at (503) 229-5326 if you have questions.

Sincerely,

Tom Gainer, P.E. Project Manager

Portland Harbor Section

Attachment: Source Control Decision

cc: Jim Anderson, DEQ NWR

Kelly Madalinski, Port

State of Oregon

Department of Environmental Quality

Memorandum

To:

Kristine Koch, US EPA

Date: October 2, 2008

Through:

Jim Anderson, Portland Harbor Manager

From:

Tom Gainer, Project Manager

Subject:

Source Control Decision

Port of Portland Terminal 5 Site

15540, 15550, and 15660 N. Lombard, Portland, OR

ECSI #1686

The Port of Portland (Port) conducted a Preliminary Assessment (PA) at their Terminal 5 (T5) facility. The primary focus of the PA was to determine if the subject site is a current source of contamination to the Willamette River. Based on its review of the PA, the Department of Environmental Quality (DEQ) concludes that the Port T5 facility does not appear to be a current or reasonably likely future source of Willamette River water or sediment contamination.

Site Description and History

Terminal 5 is located in the Rivergate Industrial District of north Portland (Figure 1). The site is located between River Miles 1 and 2 on the east bank of the Willamette River, which is within the Portland Harbor Superfund Site Study Area.

The property was undeveloped prior to 1975. Between 1964 and 1973, portions of the area were filled in preparation for development. Three tenants currently operate facilities at Terminal 5: Portland Bulk Terminals, LLC (PBT), Tenex Management Limited (Tenex), and Columbia Grain, Inc. (Figure 2). Alcatel Submarine Network (Alcatel) operated at Terminal 5 from 1988 through 2001 when it shutdown its fiber optic cable plant. The facility was unused until February 2006 when Alcatel assigned its lease to Tenex.

PBT. The PBT facility covers 141 acres. Improvements on the PBT facility were constructed beginning in 1982 to handle coal. However, the facility was never used, and in 1996 the improvements were reconstructed to handle export of bulk minerals (primarily potash (potassium chloride), a common additive to fertilizer, but also small amounts of urea, sulfate of potash, and soda ash). Minerals arrive at the facility in rail cars and are loaded into a covered storage building and then to ships at Berth 503 via conveyors. The covered conveyance system is equipped with dust suppression and collection equipment. The conveyor washing system discharges to the sanitary sewer.

A storm drain system consisting of two drainage basins drains about 80 acres of the PBT facility (Figure 2). The southern basin covers over 70 acres. Of that total area, 10 acres consists of paved roadway and 6 acres is covered with the storage building. The remaining 54 acres are unpayed with the surface primarily gravel (e.g., railroad ballast) or grass. The ground surface is relatively flat with little chance of surface erosion. The storm drain system for the southern

Port of Portland Terminal 5 Source Control Decision Memo Page 2 of 6

basin consists of surface ditches that lead to a nearly two acre settling pond (Figure 2). The pond discharges to a ditch that leads to a sedimentation manhole, a sampling manhole, and finally to outfall RG13PP on the Willamette River. The northern basin covers about six acres and is entirely paved or covered with small buildings. Storm water drains to a perimeter ditch that discharges to the sampling manhole and then outfall RG13PP.

Historical assessments identified small issues that were addressed: an empty above-ground diesel tank; storage of oil, gasoline, and paint in a trailer; and a non-PCB mineral oil release from a transformer. The former Blue Lagoon (see page 4) was historically a potential source of metals. However, the former Blue Lagoon area did not drain to the storm water system, and the area has been filled so it can not come into contact with storm water.

Alcatel/Tenex. In 1988, the Port entered into a 30-year lease with Alcatel of about 15 acres for the purpose of manufacturing fiber optic submarine cable. From 1988 through 2001, Alcatel manufactured and exported fiber optic cable. Alcatel performed all manufacturing indoors and cable was loaded onto ships at Berth 502. The location was unused from 2001 until 2006. In February 2006, Alcatel assigned its lease to Tenex. Tenex is a material supplier, primarily to the steel industry.

Over 80 percent of the Tenex parcel is paved or covered with the building. All industrial activities conducted by Tenex are performed indoors. The facility has a storm drain system that collects almost exclusively the building roof drainage and discharges through one outfall, STSOUT269, to the Willamette River (Figure 2).

The PA did not identify any source areas at the Alcatel facility. Historical assessments identified small areas of surface soil stained with petroleum hydrocarbons. That soil (about 30 cubic yards total) was removed and disposed of off-site in a landfill. The locations where that soil was removed are now beneath the facility building.

Columbia Grain. The grain terminal was constructed in 1975. It covers 42 acres and includes one berth in the Willamette River (Berth 501). Grain moves through this facility by barge, rail, or truck. Hydraulic equipment used to move the grain contains food grade oil (not petroleum hydrocarbons). The facility has about ten acres of paved surfaces and two acres of buildings. A storm drain system is present that collects storm water from the paved and building-covered areas of the facility (Figure 2). Unpaved areas do not drain to the storm drain system. Storm water discharges to the Willamette River through two outfalls (RG11PP and RG12PP).

The PA did not identify any source areas at the Columbia Grain facility.

Regulatory History

Storm Water

There are five stormwater outfalls to the Willamette River from the Port T5 site (Figure 2). The PBT and Columbia Grain facilities are permitted to discharge storm water under General 1200-Z NPDES permits; since Tenex does not conduct manufacturing or other industrial activities outdoors, no operation-specific storm water permit is required. In accordance with these permits,

these facilities have prepared and implemented storm water pollution control plans (SWPCPs) that include storm water BMPs. PBT and Columbia Grain are in compliance with their storm water permits, and there have been no recent benchmark exceedances during permit-required sampling of storm water discharges.

Historically, there have been two Notices of Non-compliance for total suspended solids at the PBT facility.

- On June 26, 1998, the DEQ issued Notice of Non-compliance #WQ-NWR-98-052 for high total suspended solids (TSS; 210 mg/L versus a permit benchmark of 130 mg/L; DEQ, 1998). According to a letter from Hall-Buck Marine (HBM) to DEQ, a resident beaver had built a dam at the Stormwater Pond discharge. Removal of the dam resulted in turbidity in the water, which may have coincided with the sampling event (Hall-Buck Marine, 1998). Additionally, the area around the sampling manhole was graded to avoid accidental soil introduction into the stormwater conveyance system.
- On January 15, 1999, the DEQ issued Notice of Non-compliance #WQ-NWR-99-008 for an elevated TSS result. A December 31, 1998, sample had 55 mg/L TSS. According to a letter from Kinder Morgan to DEQ, heavy rainfall contributed to erosion from unlined drainage ditches. Erosion controls were added in ditches and around ditch drains. A footnote to this letter from Kinder Morgan pointed out that there had been no outdoor product storage since their operations began, but two TSS exceedances had occurred within the prior eight months (Kinder Morgan, 1999a).

Underground Storage Tanks

An underground storage tank, located on property leased to Columbia Grain, was removed during May of 1998. The tank was a 3,000 gallon diesel tank. The DEQ file number is 26-98-0752. No environmental concerns were evident at time of removal, and DEQ issued a no further action determination.

Hazardous Waste

PBT is not a hazardous waste generator. Alcatel was a large quantity generator with the following waste streams reported in 2001: photo fixer silver solution, petroleum naphtha, monoethanolamine, toluene cadmium paint, nonhalogenated solvent, waste solids containing acetone and isopropanol, and waste propane cylinders. A 2007 DEQ hazardous waste inspection of this facility (now Tenex) found no violations. Columbia Grain has been a conditionally exempt generator since 1997.

Hazardous Substance Releases

PBT. In 1995, vandalism resulted in the loss of 200 to 300 gallons of mineral oil from a 2,200 gallon transformer located in the southwest portion of the PBT parcel. A sample of the mineral oil collected from the transformer was analyzed and found to contain non-detectable levels of PCBs. At the time that the vandalism was discovered, a small, older spill located east of the transformer was observed. The transformer was removed one day after the release was discovered. The Port collected soil and groundwater samples during and following cleanup activities. Spill cleanup involved the removal of approximately 25 cubic yards (CY) of soil to a depth of 4 feet below ground surface (bgs) and pumping of 1,200 gallons of water from the

excavation. Groundwater was encountered at a depth of 3 feet bgs. Impacted soil in the vicinity of the smaller, older spill was also removed to a depth of 2 feet bgs. Soil samples collected from the bottom of each excavation and from the sidewalls of the larger excavation all contained TPH at concentrations at or below 20 mg/kg.

Blue Lagoon

The Blue Lagoon was a body of water used by Oregon Steel Mills (OSM) as a source of cooling water. OSM used water from the Blue Lagoon to cool slag; water was returned to the lagoon via a drainage ditch located on OSM property. The Blue Lagoon was approximately 4 acres in size. It was contiguous with the southwestern margin of Terminal 5. The lagoon property was originally owned by the Port. In 1975, OSM purchased the lagoon property. The Port subsequently repurchased the lagoon property in 1981. However, OSM continued to use the lagoon until 1994. As of 1985, the banks and bottom of the Blue Lagoon were covered with a fine, white, powder-like material and the water was crystal clear with a distinctive green tinge. When OSM first started operating the lagoon was twice the size it was in 1985 and it extended further in a southerly direction.

Site investigations were conducted by the Port in 1994-95. Subsurface soil investigations in 1994 and 1995 collected a total of six samples from the buried sediment layer within the former lagoon. Analytical results showed subsurface concentrations of barium (75-907 mg/kg), chromium (15-236 mg/kg), copper (15-112 mg/kg), lead (4-82 mg/kg), mercury (0.03-0.26 mg/kg), nickel (6-47 mg/kg), zinc (40-550 mg/kg), and Arochlor1248 (1.4-8.7 mg/kg) that exceed DEQ's lowest SLVs for terrestrial receptors by one to two orders of magnitude; however, all metal concentrations were less than EPA industrial PRGs. In 1996 the Port filled the Blue Lagoon with sand from a pile of fill material placed on the property as surcharge. Although this buried contaminated lagoon sediment is not currently accessible to terrestrial receptors, potential future excavation of this material could result in ecological exposure if the excavated soil was not managed properly. The Port instituted a *Contaminated Area and Media Management Plan* in February 2006 to protect potential future exposure to impacted groundwater and buried sediment.

Groundwater monitoring in December 2005 showed groundwater flow towards the south to west-southwest, consistent with previous measurements (Figure 3). Although on-site concentrations of metals (Table 1) are elevated above DEQ Joint Source Control Strategy screening levels values, concentrations are stable and the estimated groundwater travel time from the former Blue Lagoon 1,200 feet to the Willamette River is approximately 40 years. Groundwater monitoring in adjacent downgradient OSM wells do not show a plume of concern. OSM monitoring well MW-20, immediately downgradient of the former Blue Lagoon and likely the only downgradient OSM well not potentially impacted by other OSM activities, showed only trace concentrations of manganese and other metals in two 2005 monitoring events (Figure 4 and Table 2). OSM concluded that the former Blue Lagoon does not appear to be a significant source of metals in groundwater at their site (Source Control Evaluation Report- Metals in Groundwater, OSM, May 12, 2006).

Port of Portland Terminal 5 Source Control Decision Memo Page 5 of 6

Alcatel/Tenex. On July 8, 1988, approximately 30 cubic yards of contaminated soil due to minor petroleum surface soil staining were removed from the Alcatel parcel and disposed in an off-site landfill.

Source Control Evaluation

Sediment sampling was conducted adjacent to Terminal 5 on several occasions from 1995 to 2000, incidental to maintenance dredging at facility berths. Based on a review of this sediment data, site operations and historic spills and/or hazardous substance releases, there does not appear to be significant sediment contamination adjacent to the subject site that is related to site activities.

Portland Harbor Round 3 sediment data for RM 1-2 adjacent to the subject site was reviewed to provide another line of evidence on whether stormwater sampling is appropriate for this site. Three near-shore surface sediment samples were collected in the general downstream vicinity of the four T5 stormwater outfall locations: DG10, DG18, and DG12 (moving downstream). One Round 3 sediment sample adjacent to T5 but upstream of the T5 stormwater outfalls (DG15) showed elevated mercury (7.1 mg/kg), which appears to be an isolated, random hit that is not likely associated with the upland site.

Round 3 Sediment Sample	DG10	DG18	DG12	JSCS SLV (toxicity/bioaccum.)
Total PCBs (ug/kg)	5.3	2.6	2.5	676/0.39
Arsenic (mg/kg)	4.5	4.5	2.6	33/7.0
PAHs (ug/kg)	740	490	1.4	22,800/NA
Mercury (ug/kg)	58	21	11	1,060/70
Dioxins (pg/g)	0.31	0.83	0.005	9/0.009
Bis(2-ethylhexyl)phthalate (ug/kg)	61	19	7.1	800/330
Total DDx (ug/kg)	4.4	3.2	1.7	various

This Round 3 sediment data do not appear to be elevated and do not indicate that there are significant current sources of contamination at the T5 Site. In general, there are no known releases or current operations that would significantly impact stormwater.

The only known groundwater impacts at the subject site are in the vicinity of the former Blue Lagoon. Downgradient groundwater and Willamette River sediment data do not indicate current or reasonable future impacts to the Willamette River. Therefore, the groundwater contaminant pathway between the Port T5 site and the Willamette River is not complete.

Port of Portland Terminal 5 Source Control Decision Memo Page 6 of 6

Summary of Source Control Decision

The following conclusions are based on review of DEQ files and information prepared as part of Port T5 PA:

- The stormwater pathway is not complete due to current site operations, no known historical site releases that could impact stormwater, and adjacent Willamette River sediment results.
- There are no current or reasonably likely future on-site groundwater contaminants that could migrate to the Willamette River.

DEQ's Source Control Decision is that this site is not a current or reasonably likely future source of contamination to the Willamette River and that no source control measures are required at this time.

Project Submittals

Preliminary Assessment, Port of Portland, September 7, 2000.

Groundwater Monitoring Report, Ash Creek Associates, January 2006.

Contaminated Area and Media Management Plan, Ash Creek Associates, February 6, 2006.

Stormwater Evaluation, Port of Portland, October 12, 2006.

Attachments: 2 Tables

4 Figures

TABLE (GROUNDWATER SAMPLE RESULTS

CONTAMINATED MEDIA MANAGEMENT PLAN PORT OF PORTLAND - TERMINAL 5

Sept.	Detection	Meximum	
Contaminant of Inferest 18 18 18 18	Frequency	Detection	Location
Total Metals (mg/L)			
Antimony	0 / 12	<0.05	
Arsenic	17 / 24	0.092	MW-4
Barium	27 / 27	2.03	MW-2
Cadmium	1 / 24	0.0023	MW-4
Chromium	10 / 24	0.274	MW-1
Copper	13 / 24	0.217	MW-4
Iron	15 / 15	71.8	MW-4
Lead	7 / 24	0.12	MW-2
Manganese	15 / 15	7.85	MW-4
Mercury	4 / 24	0.0012	MW-2
Nickel	10 / 24	0.152	MW-4
Silver	0 / 12	<0.01	
Zinc	10 / 24	0.658	MW-2
pH			
pH		11.0	MW-1
Organochlorine Pesticides			
All pesticides	0/4		
Polychlorinated Biphenyls	1		
All PCBs	0/4	***	
Chlorinated Herbicides	ŀ	1	
All chlorinated herbicides	0/4		N 80
Total Petroleum Hydrocarbons			
Oil & Grease	0/4		***
Volatile Organic Compounds			
All volatile organic compounds	0 /.4	_	-

Notes:

¹⁾ mg/L = Milligram per liter.

^{2) -- =} Not applicable or not available.

³⁾ Sources: Hahn and Associates, 1999; PTI, 1995; BBL/Ash Creek/Newfields, 2006.

Table 2. Analytical Results of Groundwater Analyses for Metals

 *	Former Ra	msey Lake	s Sump Are	a Wells			EPA's 2004		EPA's 2004
Location ID Sample ID Sample Date	MW-1-0905	MW-1 MW1-1205 12/12/2005	MW-2 MW-2-0905 9/21/2005	MW-2 MW2-1205 12/12/2005		MW-21 MW21-1205 12/14/2005	NRWQC 17.5	Drinking Water MCL	NRWQC Ecological Receptors
Arsenic	3.53	4.11	7.89	8.54	10.3	13.4	.14	10	150
Barium	11.0	12.2	6.9	8.2	14.7	10.4	NV	NV	NV
Cadmium	< 0.297	0.207	< 0.109	0.104	< 0.487	< 0.280	NV	5	.094
 Chromium	< 0.21	< 0.44	< 0.24	< 0.42	2.47	< 2.15	ŇV	100	NV
Copper	2.45 J	3.59	2.41 J	4.25	. 26.0 J ≫	5.15	NV	1300	2,9
 Lead	< 0.03	0.05	1.29	4-1.73 ×	10.9	₹7.830 J	ΝV	15	.54
 Manganese	280	223	< 0.6	< 1.12	120	90.1	.100	50	NV
 Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	.146 ^a	. 2	.77
Nickel	5.27 J	3.99 J	< 1.38	1.93 J	5.45	< 4.86	4600	730 b	16
Silver	< 0.020	+L 800.0	< 0.020	< 0.016	0.070	< 0.08	NV	100	0.12 c
Zinc	< 2.55	< 1.06	< 4.14	< 3.21	< 11.8	< 5.54	26000	5000	36.5

	Upland an	d/or Upgrad	lient Wells										EPA's 2004	B. J. J. J.	EPA's 2004
Location ID	MW-3	MW-3	MW-4	MW-4	MW-6	MW-6	MW-12	MW-12	MW-20	MW-20	MW-22	MW-22	NRWQC ;	Drinking Water MCL	NRWQC Ecological
		MW3-1205				MW6-1205	MW-12-0905	MW12-1205	MW-20-0905			MW22-1205	17.5 (g/day)	Water MCL	
Sample Date	9/20/2005	12/14/2005	9/19/2005	12/14/2005	9/20/2005	12/12/2005	9/20/2005	12/14/2005	9/19/2005	12/13/2005	11/18/2005	12/14/2005			Receptors
Arsenic	43.9	25.4	49.6	66.4	5.30	1.49	12.4	14.6	1.21	1.20	3.83	5.3	.14	10	150
Barium	39.6	42.1	23.3	49.6	102	45.0	69.7	72.5	1160	1260	39.2	48.4	NV	NV	. NV
Cadmium	< 0.065	< 0.238	0.035 J-	< 0.074	0.128 J	0.148	0.129 J	< 0.119	0.238 J	0.32	< 0.100	< 0.114	NV	5	.094
Chromium	0.73	< 2.11	0.60	< 2.03	0.91	< 0.62	0.49	< 1.70	0.58	35.5	< 0.27	< 0.42	NV	100	NV
Copper	0.29 J	< 0.53	0.15 J	< 0.11	0.23 J	2.04	0.05 J	< 0.09	1.26 J	4.88	0.40	< 0.19	NV	1300	2.9
Lead	0.03	< 0.030	0.03	< 0.039	0.10	0.06	0.01 J	< 0.021	1.40	0.43	0.14	< 0.012	NV	15	.54
Manganese	3400	2170	2330	4070	7190	1750	2950	2590	< 1.2	5.82	1220	1320	100	50	NV
Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	.146 ^a	2	.77
Nickel	2.45	< 3.64	2.17	< 3.69	1.32	4.62 J	1.36	< 2.27	4.13	16.7 J	3.12 J+	< 3.06	4600	730 b	16
Silver	< 0.020	< 0.013	< 0.020	< 0.008	< 0.020	< 0.009	< 0.020	< 0.031	< 0.008	0.017 J	< 0.019	< 0.021	NV	100	0.12 c
Zinc	0.81 J+	< 0.79	2.12 J	< 1.88	9.52 J	< 14.6	5.93 J	< 2.99	1.40 J	< 1.88	< 3.69	< 3.71	26000	5000	36.5

Exceeds EPA's 2004 NRWQC 17.5 g/day

Exceeds drinking water MCL
Exceeds both EPA's 2004 NRWQC 17.5 g/day and drinking water MCL
Exceeds EPA's 2004 NRWQC Ecological Receptors

Page 1 of 2

a - DEQ's 2004 AWQC 17.5 g/day

^b - drinking water TAP PRGs

c - DEQ's 2004 AWQC Ecological Receptors

J estimated concentration

J- estimated concentration, biased low

J+ estimated concentration, biased low

Table 2 Analytical Results of Groundwater Analyses for Metals

	Bank Wells	\$															EPA's 2004
Location ID Sample ID Sample Date	9/20/2005	MW-5 MW5-1205 12/14/2005	MW-7 MW-7-0905 9/20/2005	MW-7 MW7-1205 12/13/2005	MW-8 MW-8-0905 9/20/2005	MW-8 MW-8-1205 12/13/2005	MW-9 MW-9-0905 9/20/2005	MW-9 MW-9-1205 12/13/2005	MW-10 MW-10-0905 9/19/2005		MW-11 MW-11-0905 9/19/2005			MW-13 MW13-1205 12/12/2005	EPA's 2004 NRWQC 17.5 (g/day)	Drinking Water MCL	NRWQC Ecological Receptors
Arsenic	2.66	2.68	5.59	7.57	7 15.9	15.4 密数	16.5	10.8	29,5	沙金 39.1 上海	≥≥19.4 ×≥	18.0	# %11.2 #%	6.91	.14	10	150
Barium	15.3	14.5	28.9	26.4	97.1	87.5	43.0	25.4	48.0	54.1	55.9	77.7	73.5	57.2	NV	, NV	NV
Cadmium	0.102 J	< 0.14	0.132 J	< 0.209	0.158 J	· 0.32	0.153 J	0.17	∞ 0.102 J-	0.167	0.144 J	0.255	0.582 J	0.240	NΛ	5	.094
Chromium	1.06	< 1.19	0.53	< 0.84	0.42	< 0.70	0.39	< 0.65	0.46	< 0.63	0.46	< 0.85	0.94	< 0.38	NV	100	ΝV
Copper	2.48 J	2.67	2.01 J	6.70	0.37 J	0.54	0.24 J	0.43	0.06 J	< 0.43	0.15 J	0.96	2.32 J	1.09	NV	1300	2.9
Lead	್ಲ 0.58 ⊹ಿ	0.61	0.66	2.51	0.02	0.05	< 0.02	0.02 J+	0.02	0.05	0.04	0.17	0.30	0.07	· NV	15	.54
Manganese	502	365	1050	793	4180	2880	3890 34	3020	9020	9670	21000 ₩	22000 a	3860	4210	100	50	NV
Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	.146 ª	2	.77
Nickel	1.62	1.84 J	1.49	3.73 J	14.2	16.8 J	9.71	8.59 J	1.67	3.17 J	4.39	9.33 J	32.8	19.1 J	4600	730 ⁵	16
Silver	< 0.011	0.027	< 0.020	< 0.047	< 0.020	< 0.047	< 0.020	0.030	< 0.020	< 0.100	< 0.020	< 0.089	0.006 J	< 0.044	NV	100	0.12 c
Zinc	4.20 J	< 6.45	2.34 J	< 1.80	0.80 J+	< 2.76	1.91 J	< 2.84	7.95 J	1210 J	2.63 J	< 45.2	< 9.22	< 4.29	26000	5000	36.5

	Beach Wel	is															EPA's 2004		EPA's 2004
Location ID	1	MW-14	MW-15	WW-15 ¹	MW-15 ²	MW-16	MW-16 ²	MW-16 ¹	MVV-17	MW-17	MW-18	MW-18	MW-19	MW-19	MW-23	MW-23	NRWQC	Drinking	NRWQC
								MW16-1205-1	MW-17-0905			MW18-1205	MW-19-0905	MW19-1205			17.5 (g/day)	Water MCL	Ecological
		12/13/2005	9/21/2005	12/13/2005	12/14/2005	9/21/2005	12/12/2005	12/13/2005	9/21/2005	12/14/2005	9/21/2005	12/14/2005	9/21/2005	12/13/2005	9/21/2005	12/13/2005	17.0 (g/ddy)		Receptors
Arsenic		人员与15.0 光光	्रक ा 13.3 %े	79.97 14.7 (16)	14.6	10.8	21.8	20.2	5.25	5.65	1.72	0.76	2.37	1.37	7d 11.4 35	37/410.13.20	.14	10	150
. Barium	77.1	42.2	94.0	75.9	41.4	92.9	68.0	68.7	61,5	41.4	49.3	33.2	67.3	47.9	61.8	67.0	ΝV	ΝV	NV
Cadmium		0.15	< 0.154	0.24	0.11	< 0.144	0.174	0.18	< 0.208	0.20	< 0.134	0.09 J+	< 0.138	0.10	< 0.254	< 0.175	NV	5	.094
Chromium		< 1.00	1.86	< 1.53	< 0.97	< 0.49	< 0.70	< 0.72	< 0.31	< 0.41	< 0.25	< 0.73	< 0.31	< 0.66	0.60	< 0.70	NV	100	NV
Copper		0.58	2.14	0.38	0.56	< 0.27	< 0.34	0.49	< 0.22	0.39	< 0.23	0.43	< 0.45	0.74	< 0.31	< 0.52	NV	1300	2.9
Lead		0.19	0.78	0.03 J+	0.14	0.06	0.05	0.23	< 0.07	0.24	< 0.01	0.26 J	< 0.02	0.02 J+	. < 0.08	0.02 J+	NV	15	.54
Manganese	2010	2300	2130	2220	2210	2950	3020	2760 NO	1400	1280	892	735	2850	1420	6860	8360	100	50	NV
Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	.146 ª	2	.77
Nickel	17.0	5.35 J	7.11	3.70 J	5.11 J	8.34	7.98 J	8.05 J	24.2	18.8 J	< 1.33	· 3.71 J	4.15	5.00 J	15.5	15.5 J	4600	730 b	16
Silver		0.031	0.006 J	0.025	0.022	< 0.020	< 0.071	0.027	< 0.020	0.015 J	< 0.020	0.008 J	< 0.020	0.015 J	< 0.020	< 0.029	ΝV	100 .	0.12 c
Zinc	< 3.06	< 3.68	8.40	< 2.60	< 5.05	4.34	< 9.26	< 2.17	< 2.24	< 1.62	< 1.42	< 1.96	< 3.04	< 44.0	< 9.69	< 4.03	26000	5000	36.5

- a DEQ's 2004 AWQC 17.5 g/day b Drinking Water TAP PRGs

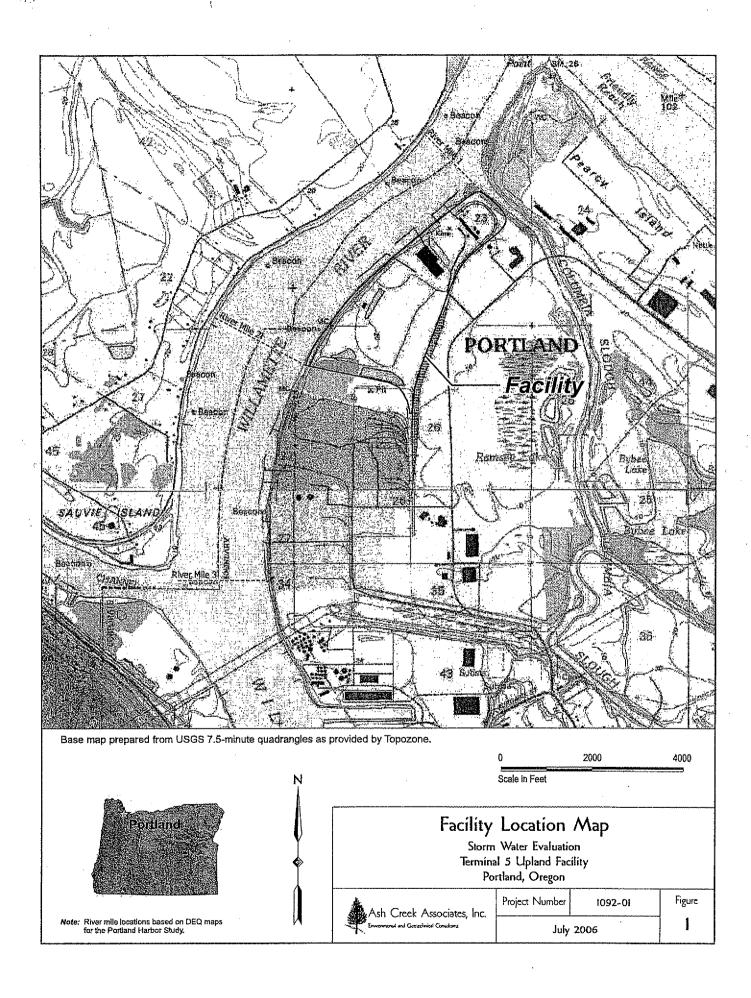
- DE0's 2004 AWQC Ecological Receptors
 sample taken after higher high tide corresponding to high conductivity
 sample taken 4 hours after high tide or 0.5 hours before lower high tide corresponding to low conductivity
- J estimated concentration
- J- estimated concentration, biased low
- J+ estimated concentration, biased low

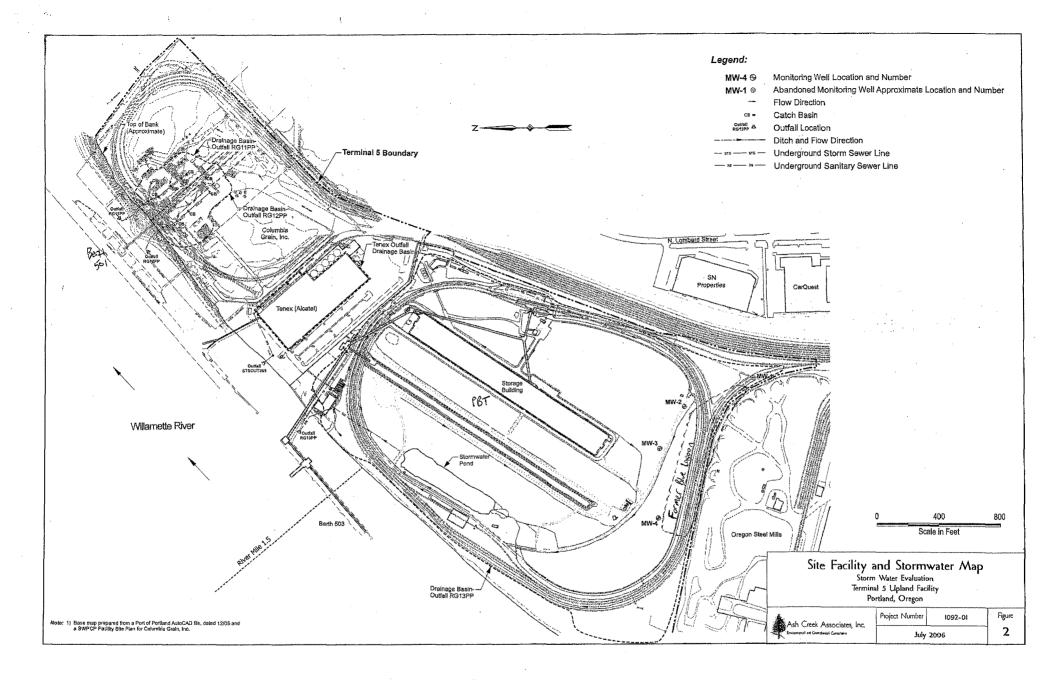
Exceeds EPA's 2004 NRWQC 17.5 g/day

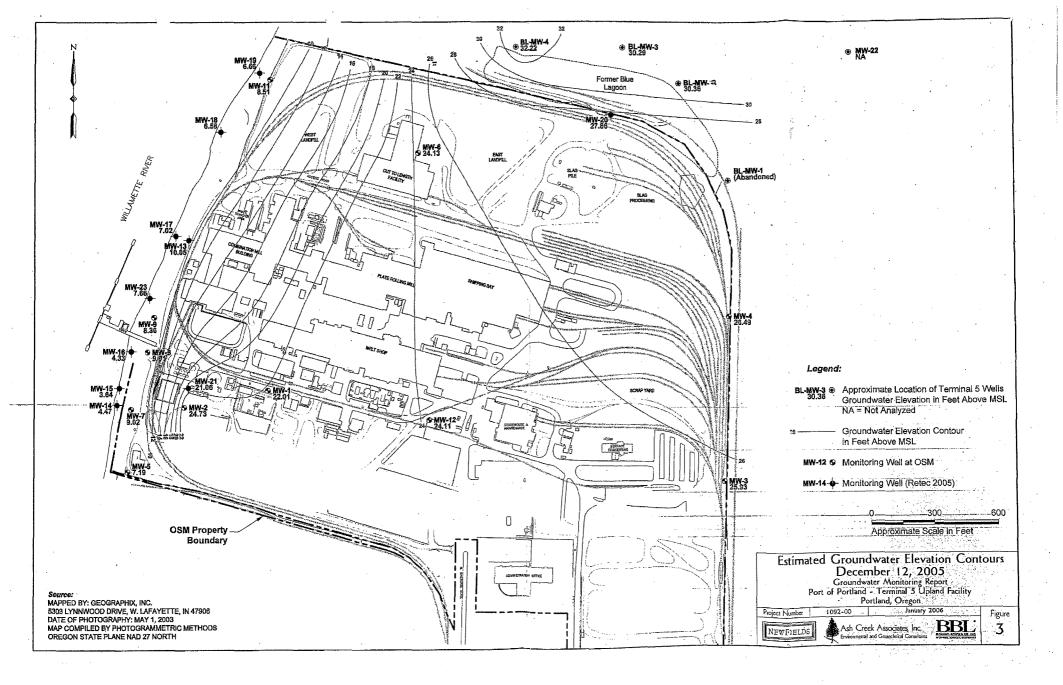
Exceeds drinking water MCL

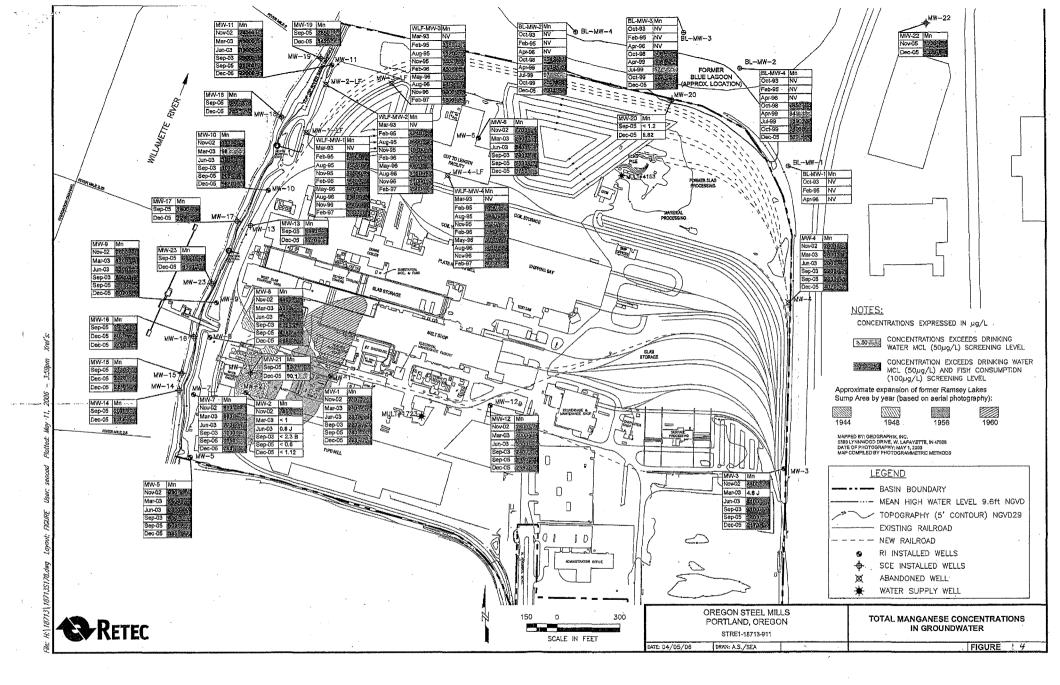
Exceeds both EPA's 2004 NRWQC 17.5 g/day and drinking water MCL

Exceeds EPA's 2004 NRWQC Ecological Receptors











6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Dan Saltzman, Commissioner • Dean Marriott, Director

CITY OF PORTLAND INDUSTRIAL WASTEWATER DISCHARGE COMPLIANCE MONITORING REPORT

ENFORCEMENT ACTION # CTM-2010-016

INDUSTRY NAME:			
	TAILLI	ICTD V	MIANAE.

Kinder Morgan Bulk Term# 5

PERMIT NUMBER:

400.132

REPORT DUE DATE:

Within 30 days of sampling

Mext available flow

SAMPLING PERIOD:

For Industrial Source Control Divis	inn lee (Inlu
1 of inquistrat source Control Prisis	IUII USU UIII ?
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SAMPLE DATE	POINT OF C	OMPLIANCE	SA	MPLE TYPE			
3/11/10@14:30		lA		GRAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	L DAILY	IMITS MONTHLY	COMMENTS
pH	EPA 150.1	7,5U m	g/L				
HEM Oil & Grease				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	namen Property		
(total)	EPAllow	ND				eresona a socialista	
HEM Oil & Grease	-	m	g/L			anderen groeinen (in) Groein polis Konskrink and i	
(non-polar)	EPA ILDOY	70			State of the state		

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEWM Oil and Grease Non-Polar constituent.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

_____ Date: 3/22/10

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Water Pollution Control Laboratory

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Date of Violation:	2/19/09	Permit No.:	400.132
Nature of Violation:	First late report of 2009	Collected by:	Self
Response Date:	2/19/09	Sample Type:	Composite
Response Number:	CTM-2009-013	Sample Location:	SMH#1A

COMPLIANCE TELEPHONE MEMORANDUM

Company:

Kinder Morgan Bulk Terminal #5

15550 N. Lombard Portland, Ore 97203

FEB 2 5 2009

Contact:

Jack Waller

Date:

2/19/09

Summary:

Kinder Morgan Bulk Terminal #5 failed to submit February 15th, 2009 Self Monitoring Report form by the due date. IU did submit SMR on February 19, 2009. Report was received in less than 30 days. This is Kinder Morgan Bulk Terminal #5 first late report of 2009.

Requirement:

Requirements to achieve compliance have been met by submitting SMR

to Permit Manager on 2/19/09.

No civil penalty will be assessed.

Permit Manager





Water Pollution Control Laboratory

6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Dan Saltzman, Commissioner • Dean Marriott, Director

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Date of Violation:	7/9/2010	Permit No.: 400.132	
Nature of Violation:	Daily limit excedence for Zinc	Collected by: Self	
Response Date:	8/6/2010	Sample Type: composite	
Response Number:	CTM-2010-047	Sample Location: 1A	

COMPLIANCE TELEPHONE MEMORANDUM

Compan	y:
--------	----

Kinder Morgan Bulk Term#5

15550 N. Lombard Portland, Ore 97203

Contact:

Jack Waller

Date:

8/6/2010

Summary:

Schedule A of Wastewater Discharge Permit No. 400.132 specifies a Zinc

daily limit of 3.7 mg/L. On 7/9/10@14:44, Kinder Morgan Bulk

Terminal #5 exceeded the Zinc limit with a 4.49 mg/L result.

Requirement:

Please resample for Zinc during next Batch Discharge to the City of

Portland sanitary system and submit analytical results within 30 days of

sampling.

THERE IS NO CIVIL PENALTY ASSESSED WITH THIS VIOLATION.

Biola Crúse

Permit Manager



Water Pollution Control Laboratory

6543 N. Burlington Avenue, Bldg. 217, Portland, Oregon 97203 • Sam Adams, Commissioner • Dean Marriott, Director

Response Number:	CTM-2008-039 and CTM-2008-040	Sample Location:	SMH#IA
Response Date:	8/12/2008	Sample Type:	Composite and Grab
Nature of Violation:	Limit exceedance for Zinc, Oil and grease	Collected by:	Collected by City
Date of Violation:	7/31/08	Permit No.:	400.132

COMPLIANCE TELEPHONE MEMORANDUM

Company:

Kinder Morgan Bulk Terminal #5

15550 N. Lombard Portland, Ore 97203

Contact:

Jack Waller

Date:

8/12/08

Summary:

Schedule A of Wastewater Discharge Permit No. 400.132 specifies a Zinc daily limit of 3.7 mg/L and a Oil and Grease limit of 110 mg/L. On 7/31/08, Kinder Morgan Bulk Terminal #5 exceeded both limits with a 4.49 mg/L result for Zinc and a 135 mg/L for Oil and Grease.

The Zinc, Oil & grease exceedance are minor violation of Wastewater Discharge Permit No. 400.132. No civil penalties will be assessed

Requirement:

Please resample for Oil/Grease and Zinc during next discharge to the City of Portland sanitary system and submit analytical results within 30 days of sampling

days of sampling.

Biola Cruse

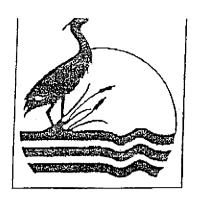
Permit Manager

12/00

Date

CTM2008039&2008040 081208

KinderMorganBuikTerm#5
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S:\BUNNY\FORMS\FAXSSSPJRM

BUREAU OF ENVIRONMENTAL SERVICES Water Pollution Control Laboratory .6543 N. Burlington Avc. Portland, OR 97203-5452 (503)823-5600 FAX (503)823-5559

FACSIMILE TRANSMISSION

TO:	Kartrina Greene	FROM: 73. Cruse
	KATONA Greene KMT-5	Phone: 503 821 9779
		_ Date: <u>9(18 (0</u> 8
WE ARE SEN	DING YOU A FAX FROM (503)	823-5559 TO FAX (\$43) 285-7733
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CITY OF PORTLAND INDUSTRIAL WASTEWATER DISCHARGE COMPLIANCE MONITORING REPORT

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Kinder Morgan Bulk Terro. 5

PERMIT NUMBER:

400.132

REPORT DUE DATE:

30 days after sample

<u>collected</u>

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17、元の、方、二、一、一、本の、一般に対象を含むない。	rial Source Control I	再启经验是记忆的代表。"我们的 对你是这一些一个一个
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Resample for CTM-2008-039&2008-040

ESANCIDO NE	POINT OF COMPLIANCE	SAVELETYPE	
8/28/08	1Λ	Composite	
PARAMETER	ANALYSIS REPORTE METHOD CONCENERA	D MDL TION	LIMPTS COMMENTS DAILY MONTHLY
zinc	" UC.1 P006493	g/L 3	3-7 mg/b

SAMPLEDATE	POINT OF COMPENNIE	SAMPLE TYPE	
8/28/08	lA	GRAB	
PARAMILTER	ANALYSISI REPORTE METHOD CONCENTRA	D MDL TION	LIPHTS COUNTENTS DATES MONTHES
Oil and Grease (NP)	EPA HOLOH APS	g/L —	110 mg/L Non-polar

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date:





Water Pollution Control Laboratory 6543 N. Burlington Ave., Portland, Oregon 97203-5452 (503) 823-5600

FOR OFFICE USE ONLY

Date of Violation:	November 14th, 2008	Permit No.:	400.132
Nature of Violation:	Failure to collect sample	Collected by:	Self
Response Date:	11/17/2008	Sample Type:	Grab
Response Number:	CTM-2008-064	Sample Location:	1A

COMPLIANCE TELEPHONE MEMORANDUM

Company:

Kinder Morgan Bulk Terminal #5

15550 N. Lombard Portland, Ore 97203

Contact:

Jack Waller

Date:

11/17/08

Summary:

Kinder Morgan Bulk Terminal #5 failed to sample for Oil and Grease during quarterly sampling in April 2008 (SMR due 5/15/08). PM and IU became aware of missed sample on 11/14/08. KMT-5 has been notified to collect sample within 24 hours of CTM notification (PM called contact on 11/17/08 to inform them of CTM and to collect sample).

Requirement:

Collect grab sample for Oil and Grease within 24 hours of CTM notification and submit results to the City of Portland Bureau of Environmental Services (IU preemptively collected O/G sample on 11/14/08).

There is no civil penalty assessed with this minor violation.

Permit/Manager

CITY OF PORTLAND INDUSTRIAL WASTEWATER DISCHARGE COMPLIANCE MONITORING REPORT

	For Industrial Source Control Division Use Only
NDUSTRY NAME: <u>Kinder Morgan Bulk Term. 5</u>	Org. ID# -25447
PERMIT NUMBER: 400.132	Date Postmarked/Received Date Entered
REPORT DUE DATE: 30 days after sample collected	Entered By:
Resample for CTM-2008-064	

SAMPLE DATE	POINT OF	COMPLIANCE	SA	AMPLE TYPE			
1119/08		1A	-	GRAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA	and the second second	MDL	the first of the second of	MITS MONTHLY	COMMENTS
HEM Oil & Grease	EPA				N/A		
(total)	14001	54.2 m	alc				
HEM Oil & Grease	EPA	34.4 "	g/L		110 mg/L		Non-polar
(Non-Polar)	1004						

1. If the value of HEM Oil & Grease is greater than 110 mg/L, then the permittee shall analyze the sample for the HEM Oil & Grease Non-Polar constituent.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Oregon DEQ Facility Profiler 2.0

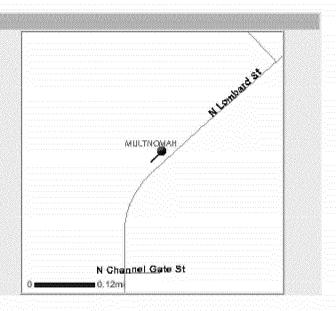
[Help] [Close Window



Facility Summary Report

Return to Site Listing Print Report





Facility/Site Name:

KINDER MORGAN BULK TERMINALS, INC. 15550 N LOMBARD ST

Address: City State Zip:

PORTLAND OR 97203-6428

Latitude: Longitude: 45° 38' 4" -122° 46' 15" HIGH

Location Accuracy: HIGH

Last Updated: 4/26/2010 10:18:50 AM

Hall Buck Marine, Inc.	TRAACS	Hall-Buck Marine, Inc.	TRAACS
HALL-BUCK MARINE, INC PREVIOUS OWNER	WQSIS	Kinder Morgan Bulk Terminals, Inc.	TRAACS
KINDER MORGAN BULK TERMINALS, INC.	WQSIS	Port Of Portland	TRAACS
PORTLAND BULK TERMINAL 5	WQSIS	Portland BulkTerminal 5	TRAACS
SSA Pacific, Inc.	TRAACS		

Geographic Features			
Township: T2N-R1W-S26	Congress Dist:	3 Forest Type:	N/A
County: MULTNOMAH	OR Senate Dist:	22 Vegetation:	Urban and industrial
Watershed: LOWER WILLAMETTE	OR House Dist:	44 Agricultural Land:	N/A
Drinking Water Source:	N/Δ		

File Number	Permit Number	Start date	Effective Date	Review Date	Permit Type	Permit SubType	Comments	Status	Detail Information ¹	Permir Status
70613	10674	02/17/1999	09/13/2002	06/30/2012	STORMWATER MINOR	NPDES General Permit - Industrial storm water discharges	GEN12Z Industrial storm water	Active Renew no eff mod	SIS Detail Report	Permii Status
70613	100226	02/17/1999	09/22/1986	07/31/1991	INDUSTRIAL MINOR	Individual NPDES - Industrial wastewater discharges	classfied with	Inactive Renew no eff mod		

70613	100796 02/17/1999 07/02/1991 05/31/1996	INDUSTRIAL MINOR		with	Inactive Renew no eff mod
70613		INDUSTRIAL MINOR	Individual NPDES - Industrial wastewater discharges		Inactive Terminated
70613	3415 02/17/1999 01/01/1901 07/31/1986	INDUSTRIAL MINOR	Individual NPDES - Industrial wastewater discharges	NPDES- IND NPDES Industrial	Inactive Renew no eff mod

SIC CODE SIC Description PRIMARY
4463 MARINE CARGO HANDLING N
4491 MARINE CARGO HANDLING Y

Air Quality Permits (TRAACS)

Air Quality Start Date Effective Date Detail Review Closed Status Type **EPA Number** Permit Date Information¹ 26-3071-SI-01 02/12/2007 06/10/1981 10/01/2011 Active ACDP Simple AQ Report OR05103071

SIC CODE SIC Description PRIMARY
4491 MARINE CARGO HANDLING Y

More Information on this location

Oregon DEQ Neighborhood Info (by region/county)
See wells in the same Township Range Section from the Oregon Water Resources Department Well logs Application
See county's scanned assessor maps through ORMAP

[DEQ's Privacy Notice] [Contact DEQ] [Application Feedback]

Disclaimer: This product is for informational purposes, and may not be suitable for legal, engineering or surveying purposes. This information or data is provided with the understanding that conclusions drawn from such information are the responsibility of the user.

¹ Linked reports may be unavailable from 9:00pm to 7:00am PST due to system maintenance.

² DEQ does not maintain air discharge permit information for Lane County.



Oregon Department of Environmental Quality

Oregon DEQ: TRAACS Permit Detail Report

See the Air Quality Permits Page for more information on Oregon Permit types

Facility Details

Facility Name: KINDER MORGAN BULK TERMINALS, INC.

Air Quality Name: SSA Pacific, Inc.

Location: 15550 N LOMBARD ST

PORTLAND, OR 97203-6428

Latitude: 45° 38' 4.00" Longitude: -122° 46' 15.00"

Primary SIC Code: 4491 MARINE CARGO HANDLING

Permit Type: Simple ACDP

Compliance Status: In compliance by certification

Activity Start: 06/10/1981
Original Issue: 02/12/2007
Review Date: 10/01/2011
Operational Status: ACTIVE

Annual Sourcewide Plant Site Emission Limits (PSEL)

Particulate Matter (less than or equal to 10 micrometers) (PM10) 14 tons/yr Last Updated: 4/26/2011 4:15:00 PM

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Protecting Oregon's Environment

Status of Permit Application

DEQ Home > Projects and Programs > Permit Application Search

Status of Permit Application - Search Results

This page displays all current permit applications for a facility.

Facility Details

Facility #: 70613

Facility Location: KINDER MORGAN BULK TERMINALS, INC. (aka

PORTLAND BULK TERMINAL 5) 15550 N LOMBARD ST

PORTLAND, OR 97203-6428

Permit Application List (click on application # to view details below)

App #	Status As Of	Current Status	Permit Type	App Type
988543	10/25/2000	Application	NPDES	Renewal without
		Received		eff modified
976447	9/24/2007	Permit Assigned	NPDES	Renewal without
				eff modified

Perform new search

If you would like to contact DEQ regarding a permit application, please contact your local DEQ office.

[print version]

Oregon Department of Environmental Quality

Headquarters: 811 SW Sixth Ave., Portland, OR 97204-1390 Phone: 503-229-5696 or toll free in Oregon 1-800-452-4011 Oregon Telecommunications Relay Service: 1-800-735-2900 FAX: 503-229-6124

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Oregon Department of Environmental Quality

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Office of the Director

Compliance and Enforcement

DEQ Home > Compliance and Enforcement > NON Search

Notice of NonCompliance (NON) Database Search Results

The following 3 records match your search criteria. They are sorted alphabetically by legal name and inspector name and are presented in two tables (The first table displays 3 Notice of NonCompliance records issued from 1998 to the present. The second table displays 0 historical Notice of NonCompliance records issued from 1973 to 1998.)

TIP - Change page orientation to landscape before printing this screen.

Search Again

Program/Region	Source Name	Staff Initials		NON Date	County	Location	Description	NON I Class	Permit #
WATER QUALITY, INDUSTRIAL NORTHWEST REGION	KINDER MORGAN BULK TERMINAL 4	EJZ	10/1/2006	12/13/2006	MULTNOMAH	11040 N LOMBARD STREET	FAILURE TO COMPLY WITH APPLICABLE FEDERAL AND STATE REQUIREMENTS, EFFLUENT STANDARDS, AND LIMITATIONS. IN VIOLATION OF A PH REQUIREMENT BY LESS THAN 0.5 PH.	Class 3	
WATER QUALITY, INDUSTRIAL NORTHWEST REGION	KINDER MORGAN BULK TERMINALS	EJZ	4/30/2004	6/7/2004	MULTNOMAH		ON APRIL 2004 DMR, ONE MONTHLY AVERAGE EXCEEDANCE FOR OIL AND GREASE.	Class 2	
WATER QUALITY, INDUSTRIAL NORTHWEST REGION	KINDER MORGAN BULK TERMINALS, INC.	EJZ	4/1/2006	5/25/2006	MULTNOMAH	11040 N LOMBARD ST	340-045-0015(5)C, SECTION 1 & 2, 340- 012-0055(3)(E)- VIOLATION OF A PH REQUIREMENT BY LESS THAN 0.5 PH	Class 3	

Total Records: 3

No historical Notice of NonCompliance (prior to 1998) records match your search criteria.

Search Again

[print version]

Oregon Department of Environmental Quality

Headquarters: 811 SW Sixth Ave., Portland, OR 97204-1390 Phone: 503-229-5696 or toll free in Oregon 1-800-452-4011 Oregon Telecommunications Relay Service: 1-800-735-2900 FAX: 503-229-6124

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PCS Detailed Reports Page 1 of 4



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You are here: EPA Home * Envirofacts PCS



Detailed Reports



PCS

Results are based on data extracted on MAY-16-2011

Pending migration to a new system, the data for the Permit Compliance System (PCS) will remain frozen in Envirofacts for the following states and territories as of the below listed dates:

Frozen as of June 6th, 2006: MA,NH,RI,VI,PR,DC,MD,IN,NM,UT,HI,AK,ID

Frozen as of August, 2006:

RECEIVING WATERS:

SLUDGE INDICATOR:

PRETREATMENT CODE:

AS,AT,CT,CZ,FM,GA,GB,GU,JA,MH,MP,MT,MW,NE,NI,NN,NV,NY,PA,PW,SD,SR,TT,UM

Frozen as of April 24th, 2008: IL

Frozen as of August 26th, 2008: AR,CA,CO,OK,TN,WI

Frozen as of June 17th, 2009: TX, LA, GM, AL

Please refer to the <u>ECHO Clean Water Act Query Screen</u> to retrieve updated data for the states frozen in Envirofacts.

Facility

FACILITY NAME (1):	KINDER MORGAN BULK TRMNLS INC	NPDES:	OR0031054
FACILITY NAME (2):		PORTLAND BULK TERMINAL 5	
STREET 1:	15550 N LOMBARD	SIC CODE:	4491 = MARINE CARGO HANDLING
CITY:	PORTLAND	MAJOR / MINOR:	
COUNTY NAME:	MULTNOMAH	TYPE OF OWNERSHIP:	PUB = PUBLIC
STATE:	OR	INDUSTRY CLASS:	X
ZIP CODE:	97203	ACTIVITY STATUS:	A = Active
REGION:	10	INACTIVE DATE :	
LATITUDE :	+4538210		
LONGITUDE :	-12246370	TYPE OF PERMIT ISSUED:	S = STATE
LAT/LON CODE OF ACCURACY:		PERMIT ISSUED DATE:	10-MAY-1996
LAT/LON METHOD:		PERMIT EXPIRED DATE:	30-APR-2001
LAT/LON SCALE:		ORIGINAL PERMIT ISSUE DATE:	20-OCT-1981
LAT/LON DATUM:			
LAT/LON DESCRIPTION	<u>.</u>		
USGS HYDRO BASIN CODE:		STREAM SEGMENT:	
FLOW:		MILEAGE IND:	
RECEIVING STREAM CLASS CODE :		FEDERAL_GRANT_IND:	

FINAL LIMITS IND:

SLUDGE CLASS FAC IND:

WILLAMETE RIVER

PCS Detailed Reports Page 2 of 4

SLUDGE RELATED ANNUAL DRY SLUDGE

PERMIT NUM: PROD:

HALL-BUCK MARINE, **MAILING NAME:**

INC

15550 N LOMBARD **MAILING STREET (2):** PO BOX 625 MAILING STREET (1):

MAILING CITY: SORRENTO **MAILING STATE:** IΑ

MAILING ZIP CODE: 707780625

SLUDGE COMMERCIAL

HANDLER:

SLUDGE HANDLER **SLUDGE HANDLER STREET**

STREET (1): (2):

SLUDGE HANDLER STATE: SLUDGE HANDLER CITY:

SLUDGE HANDLER ZIP

CODE:

COGNIZANT OFFICIAL: KEVIN JONES COGNIZANT OFFICIAL TEL: 503-285-7733

Permit Documents

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No Permit Documents Found.

Permit Tracking

KINDER MORGAN BULK TRMNLS **FACILITY NAME (1): NPDES:**

INC

PERMIT ISSUED BY:

PORTLAND BULK TERMINAL 5 **FACILITY NAME (2):**

ORIGINAL DATE OF

PERMIT ISSUED DATE: 10-MAY-1996

ISSUE:

PERMIT EXPIRED DATE:

30-APR-2001

Permit Tracking Events:

EVENT COI	DE EVENT DESCRIPTION	ACTUAL DATE
P5099	PERMIT EXPIRED	30-APR-2001
30099	PERMIT MODIFIED	05-AUG-1997
P3099	DRAFT PERMIT/PUBLIC NOTICE	26-JUN-1997
P4099	PERMIT ISSUED	10-MAY-1996
P1099	APPLICATION RECEIVED	27-DEC-1995

Inspections

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No Inspections Found.

OR0031054

S = STATE

20-OCT-

1981

PCS Detailed Reports

Page 3 of 4

Outfalls/Pipe Schedules

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No PCS Pipe Schedule Information Found.

Limits Report

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No PCS Limits Information Found

Measurements and Violations

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No PCS Measurements and Violations Information Found.

Compliance Schedules and Violations

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No Compliance Schedules Found.

Evidentiary Hearings

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No PCS Evidentiary Hearing Information Found.

Pretreatment Inspections/Audits

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No PCS Pretreatment Inspections Found.

Pretreatment Performance Summary

FACILITY NAME (1): KINDER MORGAN BULK TRMNLS INC NPDES: OR0031054

FACILITY NAME (2): PORTLAND BULK TERMINAL 5

No PCS Pretreatment Performance Summary Information Found.



Enforcement & Compliance History Online (ECHO)

You are here: EPA Home » Compliance and Enforcement » ECHO » Search Data » Search Results

Detailed Facility Report



Report Error Data Dictionary

For Public Release - Unrestricted Dissemination Report Generated on 05/26/2011 US Environmental Protection Agency - Office of Enforcement and Compliance Assurance

Gray text in this report indicates information that is not required to be reported to EPA. These data, typically regarding non-major or smaller facilities, are often incomplete.

Facility Permits and Identifiers

Data Dictionary

Statute	System	Source ID	Facility Name	Street Address	City	State	Zip
Contraction and Contraction an	FRS	110001656440	KINDER MORGAN BULK TERMINALS INCORPORATED	15550 N LOMBARD ST	PORTLAND	OR	97203
CAA	AFS	4105103071	KINDER MORGAN BULK TERMINALS, INC.	15550 N LOMBARD ST., TERM. 5	PORTLAND	OR	97203
CWA	PCS	OR0031054	KINDER MORGAN BULK TRMNLS INC PORTLAND BULK TERMINAL 5	15550 N LOMBARD	PORTLAND	OR	97203

Facility Characteristics

Data Dictionary

Statute	Source ID	Universe	Status	Areas	Permit Expiration Date	Latitude/ Longitude	Indian Country?	SIC Codes	NAICS Codes
	110001656440					LRT: 45.634647 , -122.770544	No		
CAA	4105103071	Minor (Not Fed.Rep.)	Operating	SIP			NA	4491	
CWA	OR0031054	Minor	Active		04/30/2001	45.6392 , -122.7769	No	4491	

If the CWA permit is past its expiration date, this normally means that the permitting authority has not yet issued a new permit. In these situations, the expired permit is normally administratively extended and kept in effect until the new permit is issued.

For the RCRA program, activities that contribute to an overall facility status of Active are displayed in parentheses using the acronym HPACS, where H indicates handler activities, P - permitting, A - corrective action, C - converter, and S - state-specific. More information is available in the Data Dictionary.

Inspection and Enforcement Summary Data

Data Dictionary

Statute	Source ID	Insp. Last 05Yrs	Date of Last Inspection	Formal Enf Act Last 05 Yrs	Penalties Last 05 Yrs
CAA	4105103071	0	09/07/2001	0.	\$00:
CWA	OR0031054	ō	Never	Ø.	S00

Compliance Monitoring History (05 years)

Data Dictionary

Statute Source ID System Inspection Type Lead Agency Date	Findina
I- No data records returned.	

Entries in italics are not considered inspections in official counts.

Compliance Summary Data

Data Dictionary

Information on the nature of alleged violations is available on the FAQ page.

- Commission	Statute	Source ID	Current SNC/HPV?	Description	Current As Of	Qtrs in NC (of 12)
	CAA	4105103071	N/A		04/16/2011	
	CWA	OR0031054	N/A		Oct-Dec10	

Three Year Compliance Status by Quarter

Data Dictionary

Violations shown in a given quarter do not necessarily span the entire 3 months. Information on the nature of <u>alleged violations</u> is available on the FAQ page, and information on the duration of non-compliance is available at the end of this report.

AIR Compliance Status												
Statute:Source ID CAA: 4105103071	QTR1 Apr-Jun08				QTR5 Apr-Jun09	QTR6 Jul-Sep09	QTR7 Oct-Dec09	QTR8 Jan-Mar10	QTR9 Apr-Jun10	QTR10 Jul-Sep10	QTR11 Oct-Dec10	QTR12 Jan-Mar11
HPV History							**************************************					
Program/Pollutant in	n Current Viol	ation	· · · · · · · · · · · · · · · · · · ·									
SIP												

High Priority Violator (HPV) History section: "Unaddr" means the facility has not yet been addressed with a formal enforcement action. "Addrs"means the facility has been addressed with a formal enforcement action, but its violations have not been resolved. Lead Agency designated can be US EPA, State, Both, or No Lead Determined. If HPV History is blank, then the facility was not a High Priority Violator. C=Compliance; V=Violation; S=Compliance Schedule.

Notices of Violation or Informal Enforcement - AFS, PCS, ICIS-NPDES, RCRAInfo (05 year history)

Data Dictionary

Statute Source ID Type of Action Lead Agency Date	
Statute Source ID Type of Action Lead Agency Date	2
- No data records returned.	į.
	k.

Formal Enforcement Actions - (05 year history)

AFS, PCS, RCRAInfo, NCDB

Data Dictionary

Statute Source ID Type of Action Lead Agency Date Penalty Penalty Description	- Carterian
- No data records returned.	4
4 127 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5

In some cases, formal enforcement actions may be entered both at the initiation and final stages of the action. These may appear more than once above. Entries in *italics* are not "formal" actions under the PCS definitions but are either the initiation of an action or penalties assessed as a result of a previous action. This section includes US EPA and State formal enforcement actions under CAA, CWA and RCRA.

ICIS

Data Dictionary

	Primary	Case	Case	Lead	Case	Issued/Filed	Settlement	Federal	State/Local	SEP	Comp Action
	Law/Section	Number	Type	Agency	Name	Date	Date	Penalty	Penalty	Cost	Cost
	- No data records	returned.								ole-way week retraction to the control	
1.3											

Federal enforcement actions and penalties shown in this section are from the Integrated Compliance Information System (ICIS-FE&C). These actions may duplicate records in the Formal Enforcement Actions section.

Environmental Conditions

Data Dictionary

100000000000000000000000000000000000000	Permit ID	Watershed	Watershed Name	Receiving Waters	Impaired Waters?	Combined Sewer System?
	OR0031054	17090012	Lower Willamette. Ore.	WILLAMETE RIVER	303(d) Listed	No

TRI History of Reported Chemicals Released in Pounds per Year at Site:

Data Dictionary

Voor / Total Air	Surface Water	Underground	Releases to	Total On-site	Total Off-site	Total Releases and
Year / Emissions	Discharges	Injections	Land	Releases	Transfers	Transfers
- No data records return	ned.					

TRI Total Releases and Transfers by Chemical and Year

Chemical Name -8 -7 -6 -5 -4 -3 -2 -1 0	
- No data records returned.	-

Demographic Profile of Surrounding Area (3 Miles)

Data Dictionary

Open more detailed information in a new window (links leave ECHO): 1 Mi 3 Mi or 5 Mi.

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2000 US Census data, and are accurate to the extent that the facility latitude and longitude listed below are correct. The latitude and longitude are obtained from the EPA Locational Reference Table(LRT) when available.

Radius of Area:	3 Miles	Land Area:	79.55%	Households in area:	2,377
Center Latitude:	45.639167	Water Area:	20.45%	Housing units in area:	2,704
Center Longitude:	-122.776944	Population Density:	265.85/sq. mi.	Households On Public Assistance:	174
Total Persons:	5,979	Percent Minority:	30.59%	Persons Below Poverty Level:	992

Race Breakdown	Persons (%)	Age Breakdown:	Persons (%)
White:	4,454 (74.49%)	Child 5 years and less:	546 (9.13%)
African-american:	565 (9.45%)	Minors 17 years and younger:	1,444 (24.15%)
Hispanic-Origin:	738 (12.34%)	Adults 18 years and older:	4,535 (75.85%)
Asian/Pacific Islander:	208 (3.48%)	Seniors 65 years and older:	685 (11.46%)
American Indian:	126 (2.11%)		
Other/Multiracial:	364 (6.09%)		

Education Level (Persons 25 & older)	Persons (%)	Income Breakdown:	Households (%)
Less than 9th grade:	195 (5.30%)	Less than \$15,000:	404 (17.00%)
9th-12th grades:	424 (11.53%)	\$15,000-\$25,000:	361 (15.19%)
High School Diploma:	1,308 (35.58%)	\$25,000-\$50,000;	805 (33.87%)
Some College/2-yr:	1,015 (27.61%)	\$50,000-\$75,000:	505 (21.25%)
B.S./B.A. or more:	734 (19.97%)	Greater than \$75,000:	346 (14.56%)

Notice About Duration of Violations -- The duration of violations shown on this report is an estimate of the actual duration of the violations that might be alleged or later determined in a legal proceeding. For example, the start date of the violation as shown in the ECHO database is normally when the government first became aware of the violation, not the first date that the violation occurred, and the facility may have corrected the violation before the end date shown. In some situations, violations may have been corrected by the facility, but EPA or the State has not verified the correction of these violations. In other situations, EPA does not remove the violation flag until an enforcement action has been resolved.



This report was generated by the Integrated Data for Enforcement Analysis (IDEA) system, which updates its information from program databases monthly. The data were last updated: AFS: 04/16/2011. PCS: 04/16/2011. FRS: 04/14/2011.

Some regulated facilities have expressed an interest in explaining data shown in the Detailed Facility Reports in ECHO. Please check company web sites for such explanations.

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Facility Registry System (FRS)

You are here: EPA Home * Envirofacts * FRS * Report

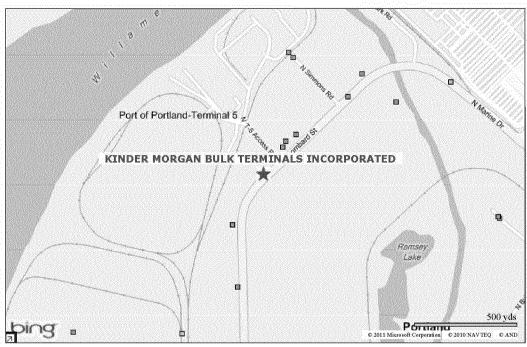


Facility Detail Report



KINDER MORGAN BULK TERMINALS INCORPORATED

15550 N LOMBARD ST PORTLAND, OR 972036428 EPA Registry Id: 110001656440



Legend

- * Selected Facility
- EPA Facility of Interest
- □ State/Tribe
- Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	Information System <u>ID</u>	Environmental Interest Type	Data Source	<u>Last Updated</u> <u>Date</u>	Supplemental Environmental <u>Interests:</u>
AIR FACILITY SYSTEM	4105103071	AIR MINOR (ACTIVE)	AIRS/AFS	01/14/2011	
OREGON - DEPARTMENT OF ENVIRONMENTAL	12595	STATE MASTER	OR-DEO		OR-SIS-70613-3415 NPDES NON-MAJOR OR-SIS-70613-100226 NPDES NON-MAJOR OR-SIS-70613-100796 NPDES NON-MAJOR
QUALITY	EXIT BISGIAMER)				OR-SIS-70613-101377 NPDES NON-MAJOR OR-SIS-70613-10674 NPDES STORMWATER PERMIT ACSIS-263071- AIR PROGRAM
PERMIT COMPLIANCE SYSTEM	OR0031054	NPDES NON-MAJOR	NPDES PERMIT	12/27/1995	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Watershed Report

Standard Industrial Classification Codes (SIC)

Transparence of the control of the c		
Data Source	SIC Code	Description Primary
Data Suulce	SIC COUE	Description Primary
PSASSA granings growing and are repaired and the SASSA		
TOTAL CONTROL OF THE PROPERTY	MINESCONO DE LO COMPANSO DE LA COMPANSO DEL COMPANSO DEL COMPANSO DE LA COMPANSO DEL COMPANSO DE LA COMPANSO DEL COMPANSO DE LA COMPANSO DEL COMPANSO DE LA COMPANSO DEL COMPANSO DE LA COMPANSO DE LA COMPANSO DE LA COMPANSO DEL COMPANSO DEL COMPANSO DE LA COMPANSO DEL COMPANSO DE LA COMPANSO	
OR-DEO	4491	MARINE CARGO HANDLING
OK DEQ	7724	MARKINE CAROO MANDEMO
NAME OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.		
verbal freeze	4.456.4	
AIRS/AFS	4491	MARINE CARGO HANDLING
THE COUNTY	P. 775E	TARTILE CARGO HARBEITO
Charles and a second se	1-1-1-0-1-0-1-0-1-0-1-0-1-0-1-0-1-0-1-0	And the second of the second o
PCS	4491	MARINE CARGO HANDLING
		THE CHARGE THE BELLIO

Facility Codes and Flags

EPA Region:	10
<u>Duns Number:</u>	965128549
Congressional District Number:	03
Legislative District Number:	
HUC Code/Watershed:	17090012 / LOWER WILLAMETTE
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	NO

Alternative Names

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description Primary
FRS	4883	SUPPORT ACTIVITIES FOR WATER TRANSPORTATION
OR-DEQ	048832	
OR-DEQ	488310	PORT AND HARBOR OPERATIONS.
OR-DEQ	488320	MARINE CARGO HANDLING.
OR-DEQ	048831	

Facility Mailing Addresses

Affiliation Type	<u>Delivery Point</u>	<u>City</u> <u>Name</u>	State	Postal Code	Information System
CONTACT	15550 N. LOMBARD	PORTLAND	OR	97203	OR-DEQ
MAILING ADDRESS OF FACILITY	15550 N. LOMBARD	PORTLAND	OR	97203	OR-DEQ
PRIMARY MAILING					

	Alternative Name	Source of Data	
	KINDER MORGAN BULK TRMNLS INC	NPDES PERMIT	
Inner	MULTIPURPOSE BULK TERMINAL	NPDES PERMIT	
	KINDER MORGAN BULK TERMINALS, INC.	AIRS/AFS	
-	HALL-BUCK MARINE, INC PREVIOUS OWNER	OR-DEQ	

raz		

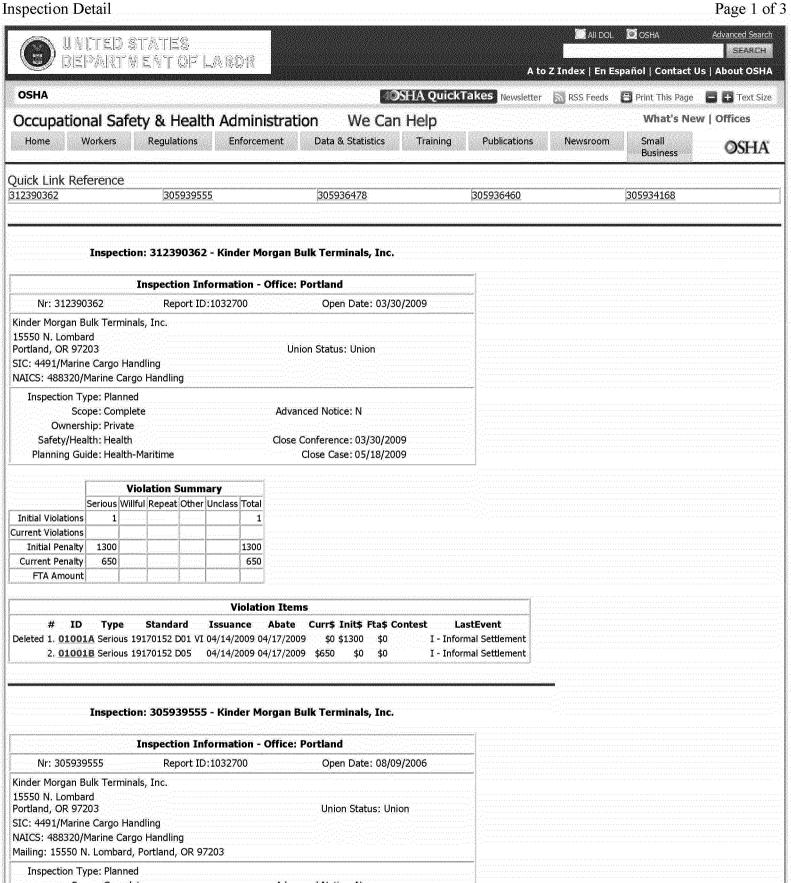
Affiliation Type	<u>Name</u>	DUNS Number	Information System	Mailing Address
CONTACT	KINDER MORGAN BULK TERMINALS, INC.		OR-DEQ	<u>View</u>
CONTACT	PORT OF PORTLAND		OR-DEQ	View
CONTACT HALL-BUCK MARINE, INC.			OR-DEQ	<u>View</u>
LEGAL OWNER	KINDER MORGAN BULK TERMINALS, INC.		OR-DEQ	<u>View</u>
MAILING ADDRESS OF FACILITY	PORT OF PORTLAND		OR-DEQ	<u>View</u>
MAILING ADDRESS OF FACILITY	KINDER MORGAN BULK TERMINALS, INC.		OR-DEQ	<u>View</u>
OWNER	KINDER MORGAN BULK TRMNLS INC		PCS	<u>View</u>

ADDRESS	15550 N LOMBARD	SORRENTO	LA	707780625	PCS
CONTACT	TERMINAL 5 15550 N LOMBARD ST	PORTLAND	OR	97203- 6428	OR-DEQ
OWNER	15550 N LOMBARD	PORTLAND	OR	97203	PCS
FACILITY MAILING ADDRESS	PO BOX 625	SORRENTO	LA	707780625	AIRS/AFS
LEGAL OWNER	15550 N Lombard St	Portland	OR	97203- 6428	OR-DEQ
MAILING ADDRESS OF FACILITY	PO BOX 625	SORRENTO	LΑ	70778- 0625	OR-DEQ
MAILING ADDRESS	15550 N Lombard St	Portland	OR	97203- 6428	OR-DEQ
CONTACT	121 NW EVERETT STREET PO BOX 3529	PORTLAND	OR	97208- 3529	OR-DEQ
CONTACT	PORT OF PORTLAND MARINE TERMINAL 5	PORTLAND	OR	97203	OR-DEQ
MAILING ADDRESS OF FACILITY	121 NW EVERETT STREET PO BOX 3529	PORTLAND	OR	97208- 3529	OR-DEQ
ALTERNATE MAILING ADDRESS	TERMINAL 5	PORTLAND	OR		PCS

Contacts

Affiliation Type	<u>Full Name</u>	Office Phone	<u>Information</u> <u>System</u>	<u>Mailing</u> Address
COMPLIANCE CONTACT	RUSS KORVOLA	5032315000	AIRS/AFS	
COGNIZANT OFFICIAL	KEVIN JONES	5032857733	PCS	
CONTACT	KEVIN JONES	(503) 825- 4200	OR-DEQ	<u>View</u>
LEGAL OWNER	KEVIN JONES	(503) 285- 4200	OR-DEQ	<u>View</u>
MAILING ADDRESS OF FACILITY	ERICA EICHELBERG	(503) 460- 4523	OR-DEQ	<u>View</u>
CONTACT	KERMIT PITRE	(503) 285- 2990	OR-DEQ	View
CONTACT	BRENT MC MULLEN	(503) 285- 2990	OR-DEQ	<u>View</u>

Query executed on: MAY-26-2011



spection Type: Planned	
Scope: Complete	Advanced Notice: N
Ownership: Private	
Safety/Health: Health	Close Conference: 08/09/2006
Planning Guide: Health-Maritime	Close Case: 09/08/2006

	Violation Summary					
	Serious	Willful	Repeat	Other	Unclass	Total
Initial Violations				2		2
Current Violations				2		2
Initial Penalty						

Current Penalty	ALL CONTROL CO	- Allermone	1	11	
FTA Amount					

1	Violation Items	
	# ID Type Standard Issuance Abate Curr\$ Init\$ Fta\$ Contest LastEven	t
	1. <u>01001A</u> Other 19100134 K03 08/17/2006 09/06/2006 \$0 \$0 \$0 -	

2. 01001B Other 19100134 K06 08/17/2006 09/06/2006 \$0 \$0 3. 01002 Other 19101200 H 08/17/2006 09/06/2006 \$0 \$0

Inspection: 305936478 - Kinder Morgan Bulk Terminals, Inc.

Inspection Information - Office: Portland

Nr: 305936478 Report ID:1032700 Open Date: 12/09/2004

Kinder Morgan Bulk Terminals, Inc.

15550 N. Lombard

Portland, OR 97203

Union Status: Union

SIC: 4491/Marine Cargo Handling NAICS: 488320/Marine Cargo Handling

Inspection Type: Complaint

Scope: Partial

Advanced Notice: N

Ownership: Private Safety/Health: Safety

Close Conference: 12/09/2004

Planning Guide: Safety-Maritime

Close Case: 02/08/2005

Related Activity: Type Complaint 200958890 Yes

	Violation Summary						
	Serious	Willful	Repeat	Other	Unclass	Total	
Initial Violations	1					1	
Current Violations	1					1	
Initial Penalty	2275				-	2275	
Current Penalty	1500					1500	
FTA Amount							

Violation Items

Health

LastEvent Type Standard Issuance Abate Curr\$ Init\$ Fta\$ Contest

1. **01001** Serious 19170017 G 01/11/2005 01/14/2005 \$1500 \$2275 \$0 I - Informal Settlement

Inspection: 305936460 - Kinder Morgan Bulk Terminals, Inc.

Inspection Information - Office: Portland

Nr: 305936460 Report ID:1032700 Open Date: 12/09/2004

Kinder Morgan Bulk Terminals, Inc.

15550 N. Lombard

Portland, OR 97203

Union Status: Union

SIC: 4491/Marine Cargo Handling NAICS: 488320/Marine Cargo Handling

Inspection Type: Complaint

Advanced Notice: N Scope: Partial

Ownership: Private

Safety/Health: Health Close Conference: 12/09/2004 Planning Guide: Health-Maritime Close Case: 12/09/2004

Related Activity: Type Health Safety Complaint 200958890

Inspection: 305934168 - Kinder Morgan Bulk Terminals, Inc.

Inspection Information - Office: Portland

Nr: 305934168 Report ID:1032700 Open Date: 10/15/2003 Kinder Morgan Bulk Terminals, Inc. 15550 N. Lombard Portland, OR 97203 Union Status: Union SIC: 4491/Marine Cargo Handling NAICS: 488320/Marine Cargo Handling Inspection Type: Planned Scope: Complete Advanced Notice: N Ownership: Private Safety/Health: Health Close Conference: 10/15/2003 Planning Guide: Health-Maritime Close Case: 11/06/2003

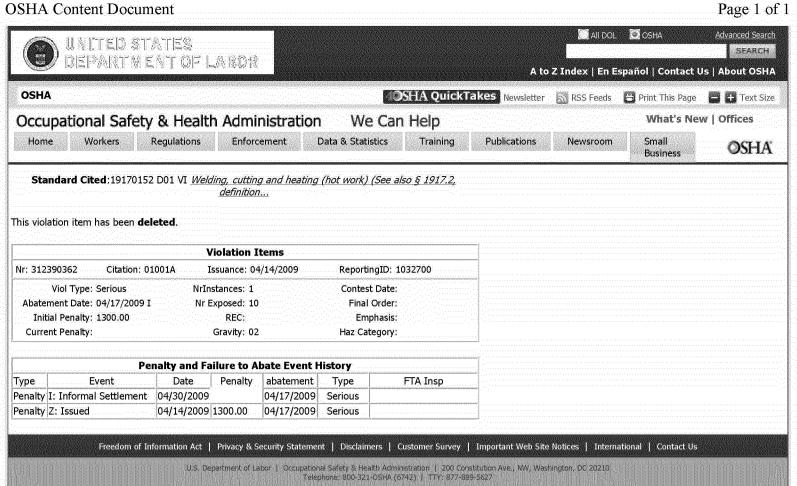
	Violation Summary					
	Serious	Willful	Repeat	Other	Unclass	Total
Initial Violations				2		2
Current Violations				2		2
Initial Penalty						
Current Penalty						
FTA Amount						

Violation Items								
# ID Type Standard	Issuance Abate	Curr\$ Init\$ Fta\$	Contest LastEvent					
1. <u>01001</u> Other 19170043 B0	5 10/21/2003 11/24/2003	\$0 \$0 \$0						
2. <u>01002</u> Other 19170048 F	10/21/2003 11/07/2003	\$0 \$0 \$0						

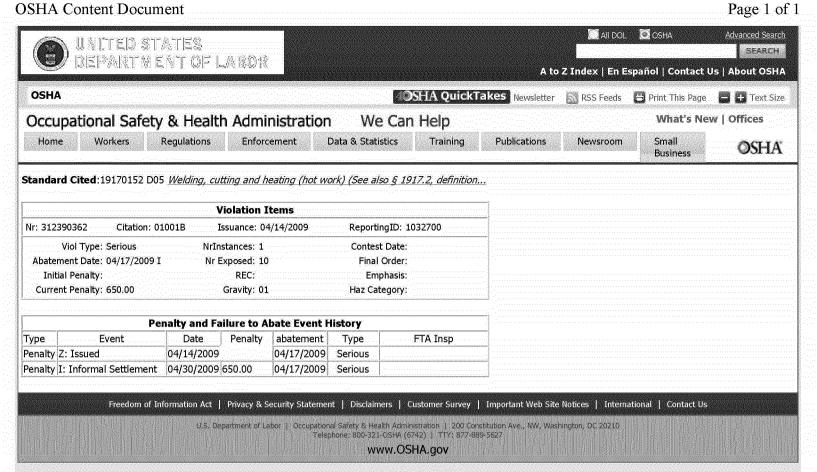
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U.S. Department of Labor | Occupational Safety & Health Administration | 200 Constitution Ave., NW, Washington, DC 20210 Telephone: 800-321-OSHA (6742) | TTY: 877-889-5627

www.OSHA.gov



www.OSHA.gov



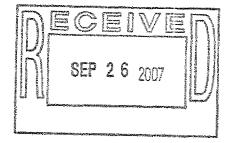


Department of Environmental Quality

Northwest Region Portland Office 2020 SW Fourth Avenue, Suite 400 Portland, OR 97201-4987 (503) 229-5263 FAX (503) 229-6957 TTY (503) 229-5471

September 25, 2007

Kevin Jones KINDER MORGAN BULK TERMINALS, INC. 101 E 8th St Vancouver, WA 98660-3295



Re:

NPDES 1200-Z Industrial Stormwater Discharge Permit Coverage

EPA # ORR807288 File No.: 70613 Multnomah County

Dear Kevin Jones:

In August 2006, the Oregon Environmental Quality Commission adopted a newly revised National Pollutant Discharge Elimination System Industrial Stormwater Discharge Permit No. 1200-Z. The Oregon Department of Environmental Quality (DEQ) has received your application to renew your coverage under this permit. DEQ is approving your registration under the new permit. The permit expires on June 30, 2012.

The purpose of the stormwater permit is to ensure registrants are providing adequate Best Management Practices on site to minimize adverse impacts to the environment from stormwater runoff, and prevent violations of the state's instream water quality standards.

The Department has entered into an agreement with the City of Portland Bureau of Environmental Services (BES) to administer this permit on the Department's behalf. Please send any written correspondence regarding your registration under the permit, stormwater monitoring results, and any other information required by the permit to BES. Receipt by BES will be treated as receipt by DEQ for purposes of meeting permit requirements.

Permit Provisions

Please review your copy of the permit carefully as there are new conditions and requirements, some of which are listed below:

• Each monitored outfall must be sampled at least four (4) times per year, at least 14 calendar days apart. Two sampling events are to occur prior to December 31st each year and the remaining two are to occur between January 1 and June 30. Once a month you must conduct visual monitoring of your outfalls when stormwater discharge is occurring. Please use the Department's Discharge Monitoring Report (DMR) form to report your stormwater sampling and visual monitoring results to BES by July 31st each year. DEQ will mail this form to you in the coming months and also make it available on the Department's website at http://www.deq.state.or.us/wq/stormwater/industrial.htm.



New 1200-Z Permit Requirements

Category	Old 1200-Z	New 1200-Z					
Benchmark Exceedances	Review and update the Storm Water Pollution Control Plan (SWPCP).	Within 30 days of receiving the results of a benchmark exceedance, submit Action Plan that contains (1) results of review, (2) a corrective action, (3) and an implementation schedule.					
C	Sampling 2 times per year.	Sampling 4 times per year					
Sampling	Samples must be collected at least 60 days apart.	Samples must be collected at least 14 days apart.					
Time or flow- weighted composite samples	No allowance for time or flow-weighted composite sampling for grab samples.	Time or flow-weighted composite samples can be used, except for pH, oil & grease, and e.coli as an alternative to grab samples.					
Monitoring Period	One sample collected between October 1 st and December 31 st and one sample collected between January 1 st and April 30 th .	Two samples collected between July 1 st and December 31 st and two samples collected between January 1 st and June 30 th .					
Employee Training	Develop an employee education program. Inform employees on the elements of the SWPCP, including spill response and good housekeeping.	Hold training within 30 days of hiring new employee who will conduct duties related to implementing the SWPCP or working in areas where stormwater is exposed to industrial activities. Conduct education program annually.					
Monthly	Monthly inspections of areas where potential spills of significant materials or industrial activities occur. May occur during any weather.	Same.					
Inspections	Monthly inspections of stormwater control measures, structures, catch basins, and treatment facilities.	Same.					
Visual Monitoring	Monthly visual monitoring for (1) oil and grease, and (2) floating solids at all outfall(s) or discharge point(s) where stormwater monitoring will occur. Must occur while discharging stormwater, i.e. when it is raining.	Same.					
Documentation	Records of inspection, maintenance and repair, education activities, and any spills.	Same.					
	Monitoring waiver can be obtained for individual parameters after four consecutive samples collected are at or below the benchmark	Limited to one permit term. Re-sample designated sampling points to establish the waiver.					
Monitoring Waiver	ALL outfalls must be sampled unless (1) outfall serves area with no exposure to industrial activity or (2) outfall has similar effluents as other monitored outfalls. Data or analysis must be provided to support this determination	ALL outfalls must be sampled unless (1) outfall serves an area with no exposure to industrial activity or (2) outfall has similar effluents and same BMPs as other monitored outfalls. Data or analysis must be provided to support this determination.					
	No monitoring waiver for visual observations	Same.					
Data Submittal	Submit annual reports and laboratory results sheets to the DEQ by July 15 th .	Submit Discharge Monitoring Report form (DMR) along with laboratory results sheets to DEQ or Agent by July 31 st .					
		In the 4 th year only, evaluate the last 4 samples collected from each outfall for each benchmark parameter, calculate the geometric mean of sample results, and report geometric mean value in DMR.					
Authorization of Non-Stormwater	No authorization for non-stormwater discharges in permit	Authorization for certain discharges such as fire- fighting activities, fire hydrants, potable water, irrigation drainage, landscape watering.					

Page 1 of 28

GENERAL PERMIT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM STORM WATER DISCHARGE PERMIT

Department of Environmental Quality 811 S.W. Sixth Avenue, Portland, OR 97204

Telephone: (503) 229-5630 or 1-800-452-4011 toll free in Oregon Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO: 9/25/2007

GEN 12-Z

MULTNOMAH/NWR

File No: 70613

ORR807288

Vallunan

KINDER MORGAN BULK TERMINALS, INC.

101 E 8th St

Vancouver, WA 98660-3295

Site: PORTLAND BULK TERMINAL 5

SOURCES THAT ARE REQUIRED TO OBTAIN COVERAGE UNDER THIS PERMIT

Pursuant to 40 Code of Federal Regulation (CFR) § 122.26(b)(14)(i - ix, xi) and OAR 340-045-0033(5), facilities identified in Table 1: Sources Covered on p. 3 below that may discharge stormwater from a point source to surface waters or to conveyance systems that discharge to surface waters. These facilities must complete the application and registration procedures to obtain coverage under the permit; see Permit Coverage and Exclusion from Coverage on p. 5 below.

Note:

- 1) Facilities may apply for conditional exclusion from the requirement to register for coverage under this permit if there is no exposure of industrial activities and materials to stormwater pursuant to 40 CFR § 122.26(g); see Permit Coverage and Exclusion from Coverage on p. 5 below.
- 2) Sources meeting the description above, but that are excluded from this permit include: (i) Construction activities, asphalt mix batch plants, concrete batch plants and Standard Industrial Classification code 14, Mining and Quarrying of Nonmetallic Minerals, Except Fuels, These activities are regulated under separate general permits; and (ii) any source that has obtained a individual NPDES permit for the discharge.

Lauri Aunan, Administrator Water Quality Division

Date: August 23, 2006

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permit registrant is authorized to construct, install, modify, or operate stormwater treatment or control facilities, and to discharge stormwater to public waters in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:



Page 3 of 28

TABLE 1: SOURCES COVERED

Types of Industrial Sources required to obtain coverage under this permit.

Facilities with the following primary Standard Industrial Classification (SIC) codes:

- 10 Metal Mining
- 12 Coal Mining
- 13 Oil and Gas Extraction
- 20 Food and Kindred Products
- 21 Tobacco Products
- 22 Textile Mill Products
- 23 Apparel and Other Finished Products Made From Fabrics and Similar Material
- 24 Lumber and Wood Products, Except Furniture and 2491 Wood Preserving. (Activities with SIC 2411 Logging that are defined in 40 CFR §122.27 as silvicultural point source discharges are covered by this permit.)
- 25 Furniture and Fixtures
- 26 Paper and Allied Products
- 27 Printing, Publishing and Allied Industries
- 28 Chemicals and Allied Products (excluding 2874 Phosphate Fertilizer Manufacturing)
- 29 Petroleum Refining and Related Industries
- 30 Rubber and Miscellaneous Plastics Products
- 31 Leather and Leather Products
- 32 Stone, Clay, Glass, and Concrete Products
- 33 Primary Metal Industries
- 34 Fabricated Metal Products, Except Machinery and Transportation Equipment
- 35 Industrial and Commercial Machinery and Computer Equipment
- 36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment
- 37 Transportation Equipment
- 38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks
- 39 Miscellaneous Manufacturing Industries
- 4221 Farm Product Warehousing and Storage
- 4222 Refrigerated Warehousing and Storage
- 4225 General Warehousing and Storage
- 5015 Motor Vehicle Parts, Used
- 5093 Scrap and Waste Materials

Facilities with the following primary SIC codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations:

- 40 Railroad Transportation
- 41 Local and Suburban Transit and Interurban Highway Passenger Transportation
- 42 Motor Freight Transportation and Warehousing (excluding 4221 Farm Product Warehousing and Storage, 4222 Refrigerated Warehousing and Storage, and 4225 General Warehousing and Storage)
- 43 United States Postal Service
- 44 Water Transportation
- 45 Transportation by Air
- 5171 Petroleum Bulk Stations and Terminals, except as provided in Note 1 below.

Facilities storing, transferring, formulating, or packaging bulk petroleum products or vegetable oils, except as provided in Note 1 below.

Steam Electric Power Generation including coal handling sites

Landfills, land application sites and open dumps (excluding landfills regulated by 40 CFR §445 that discharge "contaminated stormwater" (as defined by 40 CFR §445.2) to waters of the U.S.)

Hazardous Waste Treatment, Storage and Disposal Facilities [excluding hazardous waste landfills regulated by 40 CFR §445 that discharge "contaminated stormwater" (as defined by 40 CFR §445.2) to waters of the U.S.]

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PERMIT COVERAGE AND EXCLUSION FROM COVERAGE

1) New Application for Permit Coverage

- a) An owner or operator of a new facility or existing facility that is required to be covered under this permit must:
 - i) New facility Submit a complete application, which includes a department-approved application form; a Stormwater Pollution Control Plan (SWPCP); and applicable permit fees, to the department or agent at least 60 calendar days before the planned activity that requires permit coverage, unless otherwise approved by the department or agent (see Schedule D for description of agent). If an agent is receiving the application materials, submit two copies of the SWPCP.
 - ii) Existing facility operating without coverage under the permit Submit a complete application, which includes a department-approved application form; a SWPCP; and applicable permit fees, to the department or agent immediately. If an agent is receiving the application materials, submit two copies of the SWPCP.
 - iii) Existing facility operating under permit coverage that intends to change industrial processes Submit a complete application, which includes a department-approved application form; a SWPCP; and applicable permit fees, to the department or agent at least 60 calendar days before the planned change, unless otherwise approved by the department or agent. If an agent is receiving the application materials, submit two copies of the SWPCP.
- b) Public Review Period on new application and SWPCP*
 - The application form and SWPCP are subject to a 14-calendar day public review period before permit registration is granted by the department.
 - ii) The public review period will not begin if the application form or SWPCP are incomplete.
- c) Registration
 - i) The department or agent will notify the applicant in writing if registration is approved or denied. Permit coverage does not begin until the applicant receives written notice from the department or agent that the registration is approved.
 - ii) If registration is denied or the applicant does not wish to be regulated by this permit, the applicant may apply for an individual permit in accordance with OAR 340-045-0030.

2) Renewal Application for Permit Coverage

- a) An owner or operator of a facility registered under the 1200-Z permit that expires on June 30, 2007 must submit a complete renewal application, which includes a department-approved renewal application form; an updated SWPCP, if revisions to the SWPCP are necessary to address changed conditions or meet new permit requirements of this permit; and applicable permit fees, to the department or agent by January 30, 2007 to ensure uninterrupted permit coverage for industrial stormwater discharges. If an updated SWPCP is not submitted, the department will use the existing SWPCP for public notice purposes.
- b) Public Review Period on renewal application and SWPCP*
 - The renewal application and SWPCP are subject to a 14-calendar day public review period before permit coverage may be renewed by the department or agent.
 - The public review period will not begin if the renewal application or SWPCP are incomplete.
- c) Registration
 - The department or agent will notify the applicant in writing if registration is approved or denied.

Page 7 of 28

ii) If industrial materials or activities become exposed to rain, snow, snow melt, or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who anticipates changes in circumstances must apply for and obtain permit coverage before the change of circumstances.

- iii) The department or agent retains the authority to make a determination that the "no exposure" conditional exclusion no longer applies and require the owner or operator to obtain permit coverage.
- 5. **Revocation of Permit Coverage** The department may revoke a permit registrant's coverage under the permit pursuant to OAR 340-045-033(10).

Page 9 of 28

- (5) areas used for outdoor manufacturing, treatment, storage, or disposal of significant materials;
- (6) existing structural control measures for reducing pollutants in stormwater runoff;
- (7) material loading and access areas;
- (8) hazardous waste treatment, storage and disposal facilities;
- (9) location of wells including waste injection wells, seepage pits, drywells, etc., and
- (10) location of springs, wetlands and other surface waterbodies both on site and adjacent to the site.
- iv) Estimates of the amount of impervious surface area (including paved areas and building roofs) relative to the total area drained by each stormwater outfall.
- v) For each area of the site where a reasonable potential exists for contributing pollutants to stormwater runoff, identify the potential pollutants that could be present in stormwater discharges.
- vi) The name(s) of the receiving water(s) for stormwater drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters and the name of the municipality.
- vii) Identification of the discharge outfall(s) and the point(s) where stormwater monitoring will occur as required by Schedule B. If multiple discharge outfalls exist but will not all be monitored, include a description of the outfalls and data or analysis supporting that the outfalls are representative as described in condition B.2.b.
- c) Site Controls The permit registrant must develop, implement, and maintain the controls that are appropriate for the site. The purpose of these controls is to eliminate or minimize the exposure of pollutants to stormwater or to remove pollutants from stormwater before it discharges to surface waters. In developing a control strategy, the permit registrant must include the following four (4) types of controls in the SWPCP and describe the specific components of each control:
 - i) Stormwater Best Management Practices The permit registrant must employ the following types of best management practices that are appropriate for the site. A schedule for implementation of these practices must be included in the SWPCP if the practice has not already been accomplished. This schedule must be consistent with the requirements for implementing the SWPCP in Schedule C of this permit.
 - (1) Containment All hazardous substances (see condition D.3, Definitions) must be stored within berms or other secondary containment devices to prevent leaks and spills from contaminating stormwater. If the use of berms or secondary containment devices is not possible, then hazardous substances must be stored in areas that do not drain to the storm sewer system.
 - (2) Oil and Grease Oil/water separators, booms, skimmers or other methods must be employed to eliminate or minimize oil and grease contamination of stormwater discharges.
 - (3) Waste Chemicals and Material Disposal Wastes must be recycled or properly disposed of in a manner to eliminate or minimize exposure of pollutants to stormwater. All waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste must be covered to prevent exposure of stormwater to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.
 - (4) <u>Erosion and Sediment Control</u> Erosion control methods such as vegetating exposed areas, graveling or paving must be employed to minimize erosion of soil at the site.

Page 11 of 28

d) Record Keeping and Internal Reporting Procedures - Permit registrant must record and maintain at the facility the following information, which does not need to be submitted to the department, agent or other government agencies, unless it is requested.

- i) Inspection, maintenance, repair and education activities as required by the SWPCP.
- ii) Spills or leaks of significant materials (See condition D.3, Definitions) that impacted or had the potential to impact stormwater or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

ADDITIONAL REQUIREMENTS

4. Non-Stormwater Discharges

- a) The following non-stormwater discharges are authorized by this permit:
 - i) Discharges from fire-fighting activities.
 - ii) Fire hydrant flushings.
 - iii) Potable water, including water line flushings.
 - iv) Uncontaminated air conditioning condensate.
 - v) Irrigation drainage.
 - vi) Landscape watering, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions.
 - vii) Pavement wash waters where no detergents or hot water are used, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing.
 - viii) Routine external building washdown that does not use detergents or hot water.
 - ix) Uncontaminated ground water or spring water.
 - x) Foundation or footing drains where flows are not contaminated with process materials.
 - xi) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).
- b) Piping and drainage systems for interior floor drains and process wastewater discharge points must be separated from the storm drainage system to prevent inadvertent discharge of pollutants to waters of the state. Discharge from floor drains to the stormwater drainage system is a violation of this permit.
- c) Any other wastewater discharge or disposal, including stormwater mixed with wastewater, must be permitted in a separate permit, unless the wastewater is reused or recycled without discharge or disposal, or discharged to the sanitary sewer with approval from the local sanitary authority.

5. Water Quality Standards

- a) The permit registrant must not cause a violation of instream water quality standards as established in OAR 340-041.
- b) If the permit registrant develops, implements, and revises its SWPCP in compliance with Schedule A of this permit, the department presumes that the discharges authorized by this permit will comply with instream water quality standards unless the department obtains evidence to the contrary. Coincident samples of the discharge and at upstream and downstream locations in the receiving waterbody must be collected to establish a violation of an instream water quality standard is caused by the discharge.
- c) In instances where the department determines that the permit registrant's stormwater discharges are not complying with instream water quality standards, the department may take

Page 13 of 28

STORMWATER DISCHARGE BENCHMARKS

8. Benchmarks - Benchmarks are guideline concentrations, not limitations. They are designed to assist the permit registrant in determining whether their SWPCP is effectively reducing pollutant concentrations in stormwater discharged from the site. For facilities that are subject to federal limitations, benchmarks apply to only those pollutants that are not limited by the federal regulations. See condition A.7 for a list of facilities subject to federal limitations.

The following benchmarks apply to each point source discharge of stormwater associated with industrial activity:

Parameter	Benchmark				
Total Copper	0.1 mg/l				
Total Lead	0.4 mg/l				
Total Zinc	0.6 mg/l				
pH*	5.5 – 9.0 SU				
Total Suspended Solids*	130 mg/l				
Total Oil & Grease*	10 mg/l				
E. coli**	406 counts/100 ml				
Floating Solids (associated with industrial activities)	No Visible Discharge				
Oil & Grease Sheen	No Visible Sheen				

^{*} See condition A.7 for list of facilities subject to federal limitations.

9. Response to a Benchmark Exceedance

- a) If a stormwater sampling result exceeds any of the benchmark values, the permit registrant must, within 30 calendar days of receiving the sampling results, investigate the cause of the elevated pollutant levels, review the SWPCP and submit an Action Plan for department or agent approval.
- b) The purpose of this review is to determine if:
 - i) The SWPCP is being followed;
 - There are alternative methods for implementing the existing site controls identified in the SWPCP;
 - iii) The benchmark exceedance resulted from background or natural conditions not associated with industrial activities at the site; and
 - Additional effective site controls are needed to address the parameters of concern.
- c) The Action Plan must contain the following, unless condition A.9.d applies:
 - i) The results of the review;
 - ii) The corrective actions the permit registrant will take to address the benchmark exceedance; and
 - iii) An implementation schedule including alternative methods for implementing existing site controls or methods for implementing additional effective site controls, if the site controls have not already been implemented.

^{**}The benchmark for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

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SCHEDULE B MONITORING AND REPORTING REQUIREMENTS

 Minimum Monitoring Requirements - All permit registrants must monitor stormwater associated with industrial activity for the following:

GRAB SAMPLES	OF STORMWATER*
Parameter	Frequency**
Total Copper	Four times per Year
Total Lead	Four times per Year
Total Zinc	Four times per Year
pH	Four times per Year
Total Suspended Solids	Four times per Year
Total Oil & Grease	Four times per Year
E. coli***	Four times per Year

^{*} For each outfall monitored, the permit registrant may collect a single grab sample or a series of equal volume grab samples. Samples must be collected from the same storm event.

^{***}The monitoring for E. coli applies only to landfills, if septage and sewage biosolids are disposed at the site, and sewage treatment plants.

VISUAL MONITORI	NG OF STORMWATER
Parameter	Frequency
Floating Solids (associated with industrial activities)	Once per Month (when discharging)
Oil & Grease Sheen	Once per Month (when discharging)

- 2. Grab Sampling and Visual Monitoring Procedures and Locations The following requirements apply to monitoring conducted in compliance with condition B.1 above.
 - a) Grab Sampling and Visual Monitoring Methodology The monitoring period is from July 1 to June 30th. Grab samples must be representative of the discharge and must be taken at least 14 calendar days apart. Two samples must be collected before December 31, and two samples must be collected after January 1. Time or flow-weighted compositing of samples may be used as an alternative to grab samples, except when monitoring for pH, oil and grease, and E. coli. Visual monitoring must occur at outfall(s) or discharge point(s) identified in the SWPCP as outfall(s) or point(s) where stormwater monitoring will occur.
 - b) Multiple Point Source Discharges Each stormwater outfall must be monitored unless:
 - The outfall serves an area with no exposure of stormwater to industrial activities; or
 - ii) The outfall has effluent that is substantially similar to the effluent(s) of a monitored outfall and the same BMPs are implemented and maintained at the similar outfalls or drainage areas that lead to the outfalls. Substantially similar effluent(s) are discharges from drainage areas serving comparable activities where the discharges are expected to be similar in composition. The determination of substantial similarity or effluent(s)

^{**} The permit registrant is allowed to collect more samples than the minimum frequency requires and must report this data.

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- ii) The department or agent will notify the permit registrant in writing if the monitoring waiver is revoked.
- 4. **Monitoring Reporting Requirements** The permit registrant must submit the following to the appropriate DEQ regional office or agent:
 - a) Monitoring Data The permit registrant must submit by July 31st of each year grab sampling and visual monitoring results for the previous monitoring period (July 1- June 30). The permit registrant must also report the minimum detection levels and analytical methods for the parameters analyzed. Non-detections must be reported as "ND" with the detection limit in mg/L parentheses, e.g., ND (0.005 mg/L). In calculating the geometric mean as described in condition A.10, one-half of the detection limits must be used for non-detections.
 - b) **Report Forms -** The permit registrant must use a department-approved Discharge Monitoring Report (DMR) form for both visual and analytical monitoring results.

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b) Within 30 calendar days of department approval, the permit registrant must implement the monitoring and water quality evaluation program.

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- Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility
- Material handling sites (Material handling activities include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.)
- · Refuse sites
- Sites used for the application or disposal of process waste waters (as defined in 40 CFR § 401)
- Sites used for storage or maintenance of material handling equipment
- Sites used for residual treatment, storage, or disposal; shipping and receiving areas
- Manufacturing buildings
- Storage areas (including tank farms) for raw materials, and intermediate and finished products
- Areas where industrial activity has taken place in the past and significant materials remain
 and are exposed to stormwater. Significant materials includes, but is not limited to: raw
 materials; fuels; materials such as solvents, detergents, and plastic pellets; finished
 materials such as metallic products; raw materials used in food processing or production;
 hazardous substances designated under section 101(14) of CERCLA; any chemical that a
 facility is required to report pursuant to section 313 of title III of SARA; fertilizers;
 pesticides; and waste products such as ash, slag, and sludge that have the potential to be
 released with stormwater discharges.
- i) Stormwater Conveyance means a sewer, ditch, or swale that is designed to carry stormwater; a stormwater conveyance may also be referred to as a storm drain or storm sewer.
- j) Total Maximum Daily Load (TMDL) is the sum of the individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources and background. If a receiving water body has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

4. Local Public Agencies Acting as the Department's Agent

The department authorizes local public agencies to act as its agent in implementing this permit if they entered into a Memorandum of Agreement (MOA). The agent may be authorized to conduct the following activities, including but not limited to: application review and approval, inspections, monitoring data review, stormwater and wastewater monitoring, SWPCP review, and verification and approval of no-exposure certifications. Where the department has entered into such an agreement, the department or its agent must notify the permit registrant of where to submit no-exposure certifications, and other notifications or correspondence associated with this permit. Annual discharge monitoring reports, including analytical monitoring data and visual monitoring results, SWPCPs and Actions Plans must be submitted to both the department and the agent.

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The filing of a request by the permit registrant for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permit registrant must comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permit registrant must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permit registrant to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permit registrant only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permit registrant must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permit registrant in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a. Definitions

- (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

- (1) Bypass is prohibited unless:
 - (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (c) The permit registrant submitted notices and requests as required under General Condition B.3.c.

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- (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.
- Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any
 means.
- d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permit registrant becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permit registrant must take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

Representative Sampling

Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than \pm 10 percent from true discharge rates throughout the range of expected discharge volumes.

Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit must, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years or both.

Reporting of Monitoring Results

Monitoring results must be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permit registrant

If the permit registrant monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data

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Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

Twenty-Four Hour Reporting

The permit registrant must report any noncompliance which may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permit registrant becomes aware of the circumstances. During normal business hours, the Department's Regional office must be called. Outside of normal business hours, the Department must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission must also be provided within 5 days of the time the permit registrant becomes aware of the circumstances. If the permit registrant is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission must contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected;
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
- e. Public notification steps taken, pursuant to General Condition B.7.

The following must be included as information which must be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
- Any upset which exceeds any effluent limitation in this permit.
- c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permit registrant must report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports must contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected; and
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permit registrant must furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permit registrant must also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permit registrant becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it must promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department must be signed and certified in accordance with 40 CFR §122.22.

Falsification of Reports

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed \$100,000 per violation and up to 5 years in prison.



TO: GENETICIS FAX:
From: PORENT UC Date: 10-11-07
Re: NPDES - Pages:
<u>Ce:</u>
□ Urgent □ Please Comment □ Please Reply
I HAVE FOUND THE ROSETTA STONE !
PLEASE KEED A COPY OF THIS
CORRESPONDENCE WITH THE PERMIT.
THIS SHOULD BE ALL WE NEED TO
DO WITH THE EXCEPTION OF
UPDATING THE SWPCP
Sept X
Signature:

Confidentiality Warning. This transmission contains confidential information intended for a specific individual and purpose. The information is private, confidential, exempt from disclosure and legally protected by law. If you are not the intended recipient or the employee responsible for delivering the message to the intended recipient, you are notified that any dissemination, distribution or copying of this dominant is strictly prohibited. If you have received this information in error please notify us immediately by telephone (collect if required) and return the original to us by regular mail.

101 E. Eighth Street, Suite 260, Vancouver, WA 98660

Phone (360) 693-5300

Fax 360-906-0237

P. 03/05

1771.5



7001 1140 0000 1919 3931 **CERTIFIED MAIL** Return Receipt Requested

August 29, 2002

Mr. Ral Kapur Water Quality Section Northwest Region Oregon Department of Environmental Quality 2020 SW Fourth Street, Suite 400 Porland, OR 97204-4987

PORTLAND BULK TERMINAL 5 FILE NO. 70613; PERMIT NO. 101377

Dear Mr. Kapur:

Kinder Morgan Bulk Terminals, Inc. (KMST) has received your letter dated August 23, 2002 stating that the washing activities at our Terminal 5 dock are considered to be deminimis activities allowed without a permit in the Department's wash water NPDES permit and that, therefore, no permit is necessary for the washing activities. As requested in that letter, KMBT hareby requests a.) coverage for the storm water discharges from its Terminal 5 facility under the industrial storm water general permit (General Permit 1200Z); and b.) termination of the existing individual NPDES permit (No. 101377.)

We appreciate DEQ's assistance with our permitting needs. Please do not hesitate to call with any questions or if more information is required. You may contact me at 1-800-535-8170 or 225-675-0341. You may also contact our Regional EHS Manager, Mr. Marco Ullmer at 503-285-4200.

Sincerely yours,

KINDER MORGAN BULK TERMINALS, INC.

Marie E. Krien-Schmidt

Director, Environmental Affairs

co: K. Jones

G, Ellis

M. Ullmer

7116 Hwy. 22

P.O. Box 625

Sorrento, LA 70778-0625

800/535-8170

Fax 225/675-5923

MAY-23-2005 MON 03:13 PM RIVER CONSULTING

FAX NO. 504 837 2986

P. 04/05





Department of Environmental Quality

Northwest Region Portland Office 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 (503) 229-5263 FAX (503) 229-6987 TTY (503) 229-5471

August 23, 2002

Marie B. Krien-Schmidt Director, Environmental Affairs Kinder Morgan Bulk Terminals, Inc. P. O. Box 625 Sorrento, LA 70778-0625

Re:

NPDES Permit Renewal Terminal 5 Bulk Storage Facility File Number 70613 Multnomah County

Dear Ms. Krien-Schmidt:

This letter is in response to your letter dated July 24, 2002 requesting clarification on how the activities at the Terminal 5 Bulk Storage Facility should be permitted. Your letter stated that many of the activities originally contemplated by the NPDES permit issued to Kinder Morgan in 1997 haven't been conducted and Kinder Morgan does not intend to conduct these activities at the site. The site primarily discharges storm water and small quantities of wash water from the washing of equipment at the ship loading dock. Dennis Jurries of the Department had suggested that Kinder Morgan apply for a general industrial storm water permit in lieu of the individual NPDES permit currently issued to the facility. Mr. Jurries had also suggested that the washing activities could be determined to 'deminimis' and therefore may not require a NPDES permit.

A site visit was conducted on August 22, 2002 to determine whether discharges from the facility could be covered by a general industrial storm water permit and to evaluate the equipment washing activities. Based on the site visit, we believe that the facility could be covered by a general storm water NPDES permit (1200-Z). Regarding the washing activities, we acknowledge that the activity is a minor one and would fit under the "activities allowed without a permit" in the Department's wash water NPDES general permit. Therefore, no permit is necessary for the washing activities.

FAX NO. 504 837 2986

P. 05/05

Marie B. Krien-Schmidt Kinder Morgan Bulk Terminals, Inc.

Please submit a request for coverage under the industrial storm water general permit and for termination of the existing NPDES permit. You do not need to submit additional fees. We will apply the fees submitted with the NPDES permit renewal application to the industrial storm water general permit. You can contact me at (503) 229-5156 if you have any questions.

Sincerely,

Raj Kapur, Environmental Engineer Water Quality - Northwest Region

cc: Marco Ullmer, Kinder Morgan
Terminal 5 Bulk Storage Facility
15550 N. Lombard
Portland, OR 97203

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P. 01/05

KINDER MORGAN TERMINALS

3500 N. Causeway Blvd. Suite 210 Metairic, LA 70002

> PHONE: 504-841-3017 FAX: 504-837-2986

Date:	S/J.3/05 No. of Pages: _5 (incl'g cover sheet)
To:	Brent Mc Muller
Company;_	
Fax No.: _	373- 185-7733
From:	Marie Krien-Schmidt
cc:	
RE:	Hormater frame
Message:	as me déscussed
	Happy Felery.
	, Will

MAY-23-2005 MON 03:12 PM RIVER CONSULTING

P. 02/05



Kinder Morgan Bulk Terminals, Inc.

7116 Highway 22, P.O. Box 625, Sorrento, LA 70778-0625 Phone: (225) 675-5387 - Fax: (225) 675-8259

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Water Pollution Control Laboratory

6543 N. Burlington Avenue, Room 217, Portland, Oregon 97203 - Sam Adams, Commissioner - Dean Marriott, Director

March 1, 2007

Mr. Gene Ellis and Jack Waller Kinder Morgan B8ulk Terminal #5 15550 N. Lombard Portland, OR 97203

RE: Industrial Wastewater discharge permit #400.132

Dear Gene Ellis and jack Waller

Enclosed is Kinder Morgan Bulk Terminal #5 industrial wastewater discharge permit. As your company's permit manager, it is my desire to issue a permit that accurately reflects the conditions of your facility. Please take the time to familiarize yourself with the permit in its entirety.

Periodic compliance monitoring requirements are listed in schedule B of permit #400.132. Accompanying this permit are the pertinent reporting forms. Feel free to photocopy these forms for your use.

This permit is effective the date stated on the cover page; therefore, please take time to review the permit requirements. If you have any questions or concerns, contact me at (503) 823-9779.

Your patience is greatly appreciated.

Sincerely,

Biola Cruse Permit Manager

enc.

cc: File





Water Pollution Control Laboratory 6543 N. Burlington Ave., Portland, Oregon 97203-5452 (503) 823-5600

Expiration Date:

3/1/2012

Permit Number:

400.132

Page:

WASTEWATER DISCHARGE PERMIT

ISSUED TO:

Kinder Morgan Bulk Terminal #5

SIC CODE:

4491

PLANT TYPE:

Dry Bulk Marine Cargo

EPA CATEGORY:

400 general

LOCATION:

15550 N. Lombard St.

Portland, Oregon 97203

MAILING ADDRESS:

15550 N. Lombard St.

Portland, Oregon 97203

RESPONSIBLE OFFICIAL:

Kevin Jones

PHONE NUMBER:

(360) 693-5300

FAX NUMBER:

(503) 285-7733 Terminal Fax#

EXPIRATION DATE:

3/1/2012

INDUSTRIAL SOURCE CONTROL MANAGER

Gerald W Raumoartner

Effective Date

PREPARED BY: AC CHECKED BY:

Expiration Date:

Permit Number: Page: 3/1/2012 400.132

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INTRODUCTION

PERMITTED ACTIVITIES

The permittee is authorized to discharge industrial wastewater to the City of Portland's sewer system in compliance with Chapter 17.34 of the City Code, the Bureau of Environmental Services Administrative Rules and any applicable provisions of federal or state laws or regulations and in accordance with discharge point(s), effluent limitations, monitoring requirements, and all other conditions set forth herein.

It is the permittee's duty to comply with all conditions of this permit. Any noncompliance with permit requirements constitutes a violation of Chapter 17.34 of Portland's City Code and, as such, subjects the permittee to enforcement action(s).

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Schedule A WASTEWATER DISCHARGE LIMITATIONS

Listed below are the waste discharge limitations not to be exceeded after the permit effective date. Applicable regulations include Chapters 17.34 (Schedule F of this permit lists the General Discharge Prohibitions) and 17.36 of the Code of the City of Portland. The point of compliance with the discharge limitations shall be sampling manhole 1A.

POC (*)	Pollutant Name	Local Limit Daily Max	Categori (mg/Lmg/l,	
		(mg/L)	Daily	Monthly
	METALS		,	· · · · · · · · · · · · · · · · · · ·
	Arsenic	0.2		
	Cadmium	0.7	e i i i i i i i i i i i i i i i i i i i	nto grada tada wa
	Chromium	5.0		
i i i	Copper Lead	3.7 0.7		Karegeran in 1995 - 1995 - 1995
114,000	Mercury	0.010		
	Molybdenum	1.4		# 100 h 170
. • 1 1911	Nickel	2.8		
	Selenium	0.6		
1.3 20 20 20 20 20	Silver	0.4	en er er en en en er er er om onder ook	namen, trade e la celebra de
	Zine	3.7		
ng agai	NON-METALS (INORGANICS)	4 1	r Against an ann an Aire	1
병 별 .	Cyanide	1.2		
*	рН	5.0-11.5 su		
* 3	Total Dissolve Solids	3500 lbs/day	Starting Jul	1,2008 HE
	NON-METALS (ORGANICS)			, ,
v Ned Lev Niversiteis	1,2-Dichloroethane	0.50	an manistration (1866)	Seiten var de
. Cupraing spen	2,4-Dinitrotoluene	0.13		
	Acrylonitrile	1.00		
* 1 * * * * * * * * * * * * * * * * * *	Chlordane	0.03	FILE OF THE SECTION O	
	Chlorobenzene	0,20		
	Chloroform	0.20		
	Nitrobenzene	2.00		
	Pentachlorophenol	0.04		•
*	Trichloroethylene Non-polar Oil & Grease	0.20 110	\$ 200	·
	Total Toxic Organics	see note 7		
	Permit Specific Limits	see note 5		
	· ·-			

Notes:

- 1. This schedule may be revised upon written notification by the City to accommodate process changes by the permittee or as determined by the Director of Environmental Services.
- 2. In addition to the limits stated in Schedule A, the permittee shall comply with all other applicable City, State and Federal regulations.

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Schedule A WASTEWATER DISCHARGE LIMITATIONS

Listed below are the waste discharge limitations not to be exceeded after **the permit effective date**. Applicable regulations include Chapters 17.34 (Schedule F of this permit lists the General Discharge Prohibitions) and 17.36 of the Code of the City of Portland. The point of compliance with the discharge limitations shall be sampling manhole 1A.

POC Pollutant (*) Name	Local Limit Daily Max	Categorica (mg/Lmg/l, l	
	Max (mg/L)	Daily	Monthly
METALS	.		14811414
Arsenic	0.2		. 4
Cadmium	0.7		
Chromium	5.0		
Copper	3.7		
Lead	0.7	* 1.	
Mercury	0.010		
Molybdenum	1.4		
Nickel	2.8	The American Commission	
Selenium	0.6		
Silver Zinc	0.4 3.7	an Sunday.	MET WE
NON-METALS (INORGANICS)			
Cyanide	1.2		
* pH	5.0-11.5 su		
* Total Dissolve Solids	1721		
	lbs/day	44.3	1
NON-METALS (ORGANICS)			
1,2-Dichloroethane	0.50		·. · · · · · · · · · · · · · · · · · ·
2,4-Dinitrotoluene	0.13		
Acrylonitrile	1.00	* ***	
Chlordane	0.03		
Chlorobenzene	0.20		
Chloroform	0.20		
Nitrobenzene	2.00		
Pentachlorophenol	0.04		
Trichloroethylene	0.20		
Non-polar On & Grease	110		
Total Toxic Organics	see note 7		
Permit Specific Limits	see note 5		

Notes:

1. This schedule may be revised upon written notification by the City to accommodate process changes by the permittee or as determined by the Director of Environmental Services.

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- 3. The pollutant parameters marked with an asterisk (*) are the pollutants of concern. At a minimum, the permittee is required to monitor for pollutants of concern. All limits are applicable at the point of compliance.
- 4. The permittee is required to meet the <u>MOST</u> stringent limitation listed, denoted in bold type in the above table, when comparing the *Local Limit* column with the *Categorical Limit* column.
- 5. The TDS limitation of 3500 lbs/day, for a 24 hour period, is a permit specific limit developed and implemented in accordance with Bureau of Environmental Services Administrative Rules, Section II (4)).
- 6. The City has Pollutant Prohibitions for certain individual organic compounds that are not amenable to biological treatment or that have a screening value or local limit that is less than the practical method detection level (MDL). Discharges containing concentrations of a prohibited pollutant above the MDL, as listed in Appendix 5, is a violation of City Code and this permit.

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2. In addition to the limits stated in Schedule A, the permittee shall comply with all other applicable City, State and Federal regulations.

- 3. The pollutant parameters marked with an asterisk (*) are the pollutants of concern. At a minimum, the permittee is required to monitor for pollutants of concern. All limits are applicable at the point of compliance.
- 4. The permittee is required to meet the <u>MOST</u> stringent limitation listed, denoted in bold type in the above table, when comparing the *Local Limit* column with the *Categorical Limit* column.
- 5. The TDS limitation of 1721 lbs/day, for a 24 hour period, is a permit specific limit developed and implemented in accordance with Bureau of Environmental Services Administrative Rules, Section II (4)).
- 6. The City has Pollutant Prohibitions for certain individual organic compounds that are not amenable to biological treatment or that have a screening value or local limit that is less than the practical method detection level (MDL). Discharges containing concentrations of a prohibited pollutant above the MDL, as listed in Appendix 5, is a violation of City Code and this permit.

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Schedule B MONITORING AND REPORTING REQUIREMENTS

II. Periodic Compliance Self-Monitoring Report

		First Quarter		Second Quarter		Third Quarter			Fourth Quarter				
Parameter	Sample Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
pH	Grab	✓			√			1			1		
Oil and Grease (Non-Polar)	Grab	V			✓			V			✓		
Zinc	Composite	1			1			1			√		
Total Dissolve Solids (lbs/day)	Composite	1			✓			✓			✓		
Due Dates		Feb 15	Mar 15	Арг 15	May 15	Jun 15	Jul 15	Aug 15	Sept 15	Oct 15	Nov 15	Dec 15	Jan 15

II. Periodic Compliance Self-Monitoring Report, Notes:

- 1. Periodic Compliance Reports are to be submitted to the Industrial Source Control Division by the 15th of the month following the conclusion of the reporting period. Sampling, analysis, and reporting will follow the schedule above.
- 2. All official sampling shall be taken at the approved sampling location. (See Appendix 2: sampling location map.)
- 3. The permittee shall analyze samples for all listed parameters plus any other which might be expected to be present in significant quantities.
- 4. The permittee shall submit all self-monitoring results to the Industrial Source Control Division as part of their monitoring and reporting requirements.
- 5. All monitoring results are to be mailed to:

Industrial Source Control Division Bureau of Environmental Services City of Portland 6543 N. Burlington Ave. Portland, OR 97203

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- 6. Periodic Compliance Reports are to be submitted by the 15th of each month following the report period for each sampling location. The reports shall consist of:
 - Statement of compliance/noncompliance, signed by the officially designated contact person (statement is found on bottom of the self-monitoring report form).
 - b. Sample analysis results recorded on the appropriate self-monitoring report form and chain of custody for sample collected.
 - c. Originals of all laboratory analysis sheets showing who analyzed sample, date and time sample was analyzed, analytical methods used, method detection limit, test result, and quality assurance/quality control.
 - d. Copies of pH charts (if any) showing violations (if any).
 - e. Any other reports that may be required.
 - f. Calculations of monthly average, if appropriate.
- 7. The permittee should instruct its laboratory that, if the oil and grease (total) concentration exceeds 110 mg/L, the laboratory should determine the concentrations of the polar and non-polar oil and grease fractions.
- 8. The City may reduce or increase the frequency of sampling, based on the analytical results submitted.
- 9. As per 40 CFR 403.12(g)(5), if an industrial user subject to the reporting requirements of Schedule B monitors any parameter from the official sampling location more frequently than required, using procedures specified in Schedule E14(c), the results of their monitoring must be submitted in the required report.

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Schedule C COMPLIANCE SCHEDULE

Not Applicable

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Schedule D SPECIAL CONDITIONS

Kinder Morgan Bulk Terminal #5 is required to discharge wastewater from their facility at a consistent rate throughout the day (24 hours) in order to minimize slug loads that could potentially impact the Columbia Blvd Wastewater Treatment Plant.

Discharge Meter

The meter shall be calibrated and maintained as specified in the Meter O & M Plan and recorded in a calibration/maintenance log and be available for review during inspection or upon request. At a minimum, the log shall include: date of maintenance/calibration, description of maintenance/calibration, name and title of technician, and any additional comments.

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Schedule D SPECIAL CONDITIONS

Discharge Meter

The meter shall be calibrated and maintained as specified in the Meter O & M Plan and recorded in a calibration/maintenance log and be available for review during inspection or upon request. At a minimum, the log shall include: date of maintenance/calibration, description of maintenance/calibration, name and title of technician, and any additional comments.

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Schedule E GENERAL CONDITIONS

1. Accidental Spill Prevention Plan

To comply with Section 17.34.090 of the City Code, the permittee shall submit a new or revised Accidental Spill Prevention Plan (ASPP) to the Industrial Wastewater Management Section 90 days after the effective date of this permit. The plans shall include the following elements.

- a. A description of the hazardous substances handled and their potential points of entry into the City sewer system or storm runoff
- b. A description of the measures to be taken to prevent entry at the described points before a spill occurs
- c. Measures to be taken to contain a spill if one occurs
- d. A description of employee training in the prevention and control of spills
- e. A posted notice informing employees of the requirement to notify the Bureau of Environmental Services in case of spills or uncontrolled discharges.

2. Appeal

Upon receipt of a final industrial wastewater discharge permit, a permittee may appeal any of its terms or conditions to the Code Hearings Officer in accordance with procedures set out at Chapter 22.10 of the Portland City Code; provided that such an appeal shall include a copy of the permit that is the subject of the appeal, shall state the basis for the appeal, and shall be filed with the Code Hearings Officer and the Bureau of Environmental Services.

3. Authorized Discharge

All discharge and activities authorized herein shall be consistent with the terms and conditions of this permit, Chapter 17.34 of the City Code and the Administrative rules. The discharge of any pollutant in excess of these limits shall constitute a violation of the terms and conditions of this permit.

4. Bypass or Diversion

The diversion or bypass (the intentional diversion of wastestreams from any portion of a permittee's treatment facility) of any discharge, from facilities used by the permittee, to maintain compliance with the terms and conditions of this permit is prohibited except:

- a. When unavoidable to prevent loss of life or severe property damage.
- b. When excessive storm drainage or runoff would damage facilities necessary for compliance with the terms and conditions of this permit.

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4. Bypass or Diversion (continued)

The permittee shall immediately notify the City in writing of each such diversion or bypass, in accordance with the procedure specified in condition No. 23.

5. Certification

Legible copies of all applications, reports, and information submitted to the City shall be signed and certified as follows in accordance with 40 CFR 403.12.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

6. Chemical Storage

Chemicals shall be stored in a manner that will prevent the entry of these substances into the sanitary, combined sewer, or storm sewer system, or waters of the state.

7. Continuous Compliance

Compliance with Schedule E, No. 23 shall not relieve the permittee from responsibility to maintain continuous compliance with the conditions of this permit.

8. Dilution Prohibition

It is unlawful for a discharger to use dilution as a partial or complete substitute for adequate treatment to achieve compliance with the standards and limitations set forth in this permit. The Director may impose mass limitations on dischargers who are using dilution to meet the applicable pretreatment standards or the requirement set forth in this permit.

9. Enforcement Provision

A violation of any conditions, standards or requirements of this permit constitutes a violation of Chapter 17.34 of the City Code and any rules promulgated thereunder. Therefore, the City may seek any or all of the remedies or penalties provided for in Section 17.34.110 of the City Code, including recovery of costs incurred by the City, in response to the following:

- a. Any violation by the permittee of the provisions in this Industrial Wastewater Discharge Permit.
- b. Any violation by the permittee of the provisions of the City Code.

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9. Enforcement Provision (continued)

c. Any violation by the permittee of an Enforcement Action requirement with respect to provisions set forth in this Industrial Wastewater Discharge Permit and the City Code and Administrative Rules.

The range or severity of enforcement actions taken by the City against the permittee will be determined by, but not limited to, the nature, magnitude, duration, and frequency of the violation as provided by City Code and Administrative Rules.

10. Extra-Strength Sewer Charge (ESSC)

Discharges exceeding 300 mg/L for the 5-day biochemical oxygen demand (BOD) or 350 mg/L total suspended solids (TSS) concentrations (as defined in Section 17.36.060(1) of the City Code) shall be subject to the extra-strength sewer charge (ESSC) established in Section 17.36.060(1).

11. Hazardous Waste Notification

The industrial user shall notify the Industrial Source Control Division Section, the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities in writing of any discharge into the POTW of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the industrial user discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification shall also contain the following information to the extent such information is known and readily available to the industrial user: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following 12 months.

12. Inspection and Entry

The permittee shall, at all reasonable times, allow authorized representatives of the City:

- a. To enter the permittee's premises where an effluent source or disposal system is located or where any records associated with this permit are kept.
- b. To have access to any required records and permission to copy these records. At no time can wastewater effluent data be claimed or held as confidential information.
- c. To inspect and evaluate any monitoring equipment or monitoring methods required by this permit.
- d. To sample any discharge to the sewer system.

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13. Liability

The City of Portland, its officers, agents or employees shall not sustain any liability due to the issuance of this permit or the construction or maintenance of facilities resulting from this permit.

14. Monitoring

- a. The permittee shall record the following information:
 - * The exact date, time, and place of sampling
 - Name of person who collected the sample(s)
 - Type of sample(s) collected
 - * The dates analyses were performed
 - * Who performed the analyses
 - * The analytical techniques or methods used
 - The results of all required analyses
 - * Whether quality assurance and quality control laboratory procedures are followed
- b. Samples and measurements, taken to meet the requirements of the above condition, shall be representative of the effluent. Grab samples must be collected for pH, cyanide, phenol, sulfide, volatile organic compounds and oil and grease monitoring.
- c. All sampling and analytical methods used to meet the monitoring requirements specified in this permit shall, unless otherwise approved in writing by the City, conform to the Guidelines Establishing Test Procedures for the Analysis of Pollutants as specified in 40 CFR, Part 136. Laboratory quality assurance and quality control programs should be documented. EPA QA/QC programs should be followed.
- d. The permittee is required to document proper installation, and maintenance of flow monitoring and sampling equipment.
- e. If the results of the permittee's wastewater analysis indicate that a noncompliance has occurred, the permittee must notify the City's Industrial Source Control Division Section within 24 hours of becoming aware of the noncompliance. The permittee must also repeat the sampling within 24 hours of the effluent noncompliance or next process day and submit the analysis to the City within 30 days after becoming aware of the noncompliance.
- f. The permittee shall take all reasonable steps to minimize or correct any adverse impact to the POTW or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

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14. Monitoring (continued)

g. If requested, the permittee shall provide or split discharge samples with the City of Portland Water Pollution Control Laboratory.

15. Permit Modification

This permit may be modified with 30 days prior written notification, in whole or in part, for causes including but not limited to the following:

- a. A change in the City's NPDES permit or any other condition that requires either a temporary or permanent elimination of any authorized discharge.
- b. To incorporate new or revised federal, state, or local pretreatment standards or requirements.
- c. Information indicating that the permitted discharge poses a threat to the City's collection and treatment system, POTW personnel, or the receiving waters and sludge.
- d. To correct typographical or other errors in the permit.
- e. Any significant change in the volume of a permitted discharge.

16. Permit Renewal

This permit is issued to a specific entity and cannot be transferred by the industrial user and must be renewed pursuant to Section 17.34.070 of the Code of the City of Portland and Permit Applications must be received 90 days prior to:

- a. Expiration date of current permit.
- b. In the event the permittee plans to cease operations at the present location, and plans to relocate within the City of Portland's jurisdiction and continue the same permitted activities.
- c. The permitted industrial process being significantly altered or changed so that pollutants not specifically mentioned in the current permit are present in the permittee's discharge.

17. Permit Suspension or Termination

- a. Violation of any terms or conditions of this permit or any applicable rule, standard, or order of the director of the Bureau of Environmental Services.
- b. Obtaining this permit by misrepresentation or failure to fully disclose all relevant facts.
- c. Falsifying self-monitoring reports.
- d. Tampering with monitoring equipment.

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17. Permit Suspension or Termination (continued)

- e. Refusing to allow prompt access to the facility premises and records.
- f. Failure to meet effluent limitations.
- g. Failure to pay fines.
- h. Failure to meet compliance schedules.

18. Plant Closure

In the event the permittee plans to cease operations at the present business location, and not to relocate within the City of Portland's jurisdiction, the permittee shall inform this office, in writing, 60 days prior to plant closure.

19. Property Rights or Privileges

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges; it does not authorize any injury to private property or any invasion of personal rights; and it does not authorize any infringements or federal, state, or local laws or regulations.

20. Records Retention

All records of monitoring activities and results, including all original strip chart recordings for continuous monitoring instrumentation (and calibration and maintenance records), shall be retained by the permittee for a minimum of three years. This retention period shall be extended during the course of any unresolved litigation pertaining to the discharge of pollutants by the permittee, or whenever it is requested by the City, the Approval Authority (DEQ), the Regional Administrator (EPA).

21. Reporting Requirements

a. Accidental or Slug Loading

If accidental or slug loading to the sanitary sewer occurs, the permittee shall notify the City Permit Manager immediately, if no response then call the City Duty Officer at 503-823-7180 (M-F 8:00am - 4:30pm) or 503-323-3398 (after 4:30pm and weekends). A formal written report, discussing circumstances and remedies, shall be submitted to the City within 5 days of the occurrence

b. Changes in Wastewater Characteristics

The permittee shall give notice to the Industrial Source Control Division Section 90 days before any facility expansion, production increase, or process modifications that result in new or substantially increased discharges or a change in the nature of the discharge.

Schedule E GENERAL CONDITIONS

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Change in representative
 If the responsible corporate official changes, notify the City within 10 days, as per 40 CFR 403.12 (1) (4).

22. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to the other circumstances and the remainder of this permit shall not be affected.

23. Slug Load Notification

If the permittee is unable to comply with all the conditions of this permit due to a breakdown of equipment or facilities, an accident caused by human error or negligence, or any other cause such as an act of nature, or should any condition cause the release of any slug load, the permittee shall:

- a. Immediately take action to stop, contain, clean up the unauthorized discharges, and correct the problem.
- b. Immediately call the City Permit Manager, if no response then call the City Duty Officer at 503-823-7180 (M-F 8:00am 4:30pm) or 503-323-3398 (after 4:30pm and weekends).
- c. Within five (5) days submit a detailed written initial report to the City Permit Manager describing the breakdown, the actual quantity of resultant waste discharges, the corrective action taken, the steps taken to prevent recurrence, and any other pertinent information.
- d. Samples shall be taken immediately upon discovery of the Slug load. Within 15 days, a follow-up report shall be submitted. The report shall contain analysis of samples taken during such discharge and samples taken after normal conditions have been restored. The samples, at a minimum, shall be analyzed for the parameters required in Schedule B. Sampling shall be continued until all parameters are within discharge limits.

24. Upset

a. Definition:

For the purposes of this section, upset means an exceptional incident in which there is unintentional and temporary noncompliance with applicable pretreatment standards, because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Upset:

An upset will constitute an affirmative defense to an action brought for noncompliance with applicable pretreatment standards, if the requirements of paragraph c are met.

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24. Upset (continued)

c. Conditions Necessary for a Demonstration of an Upset:

A permittee who wishes to establish the affirmative defense of an upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and the permittee can identify the specific cause(s) of the upset.
- (2) The facility was, at the time, being operated prudently, efficiently, and in compliance with applicable operation and maintenance procedures.
- (3) The permittee has submitted the following information to the Industrial Source Control Division within 24 hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within 5 days).
 - * A description of the indirect discharge and cause of noncompliance
 - * The period of noncompliance, including exact dates and times or, if not corrected, the anticipated duration of noncompliance
 - * Steps planned or now being taken to reduce, eliminate, and prevent recurrence of the noncompliance

d. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset shall have the burden of proof.

e. Permittee Responsibility in Case of an Upset.

If reduction, loss, or failure of its treatment facility occurs, the permittee shall control production of all discharges in order to maintain compliance with applicable pretreatment standards until the facility is restored or an alternative method of treatment is provided. This requirement especially applies if the primary source of the treatment facility power is reduced, lost, or failed.

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Schedule F GENERAL DISCHARGE PROHIBITIONS

The permittee shall not discharge, cause to discharge or allow to discharge directly or indirectly into the City sewer system any of the following:

- 1. Wastewater containing substances in such concentrations that they inhibit or interfere with the operation or performance of the sewer system, or that are not amenable to treatment or reduction by the sewage treatment process employed, or are only partially amenable to treatment such that the sewage treatment plant effluent cannot meet the requirements of any agency having jurisdiction over its discharge to the receiving waters, or that prevent or impair the use or disposal of sewage treatment plant sludge and sludge products in accordance with applicable State and federal regulations;
- 2. Any liquids, solids, or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction to cause fire or explosion or be injurious in any other way to the operation of the sewer system, or wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Celsius (using test methods prescribed at 40 CFR 261.21), or discharges which cause the atmosphere in any portion of the sewer system to reach a concentration of 10% or more of the Lower Explosive Limit (LEL).
- 3. Any solid or viscous substances capable of obstructing wastewater which will or may cause obstruction to the flow of wastewater or other interference with the operation of the sewer system;
- **4.** Any noxious, malodorous or toxic liquids gases, vapors or fumes, solids, or other substances which, either singly or by interaction with other wastes, may cause acute or chronic worker health and safety problems, a public nuisance, a hazard or interference with any part of the sewer system;
- 5. Any industrial wastewater containing a hazardous or toxic substance which, either singly or by interaction with other substances, injures or interferes with the sewer system or constitutes a hazard to humans or animals, or creates a hazard in, or adversely affects the receiving waters, or results in such substances being discharged in combined sewer overflows or sewage treatment plant effluent in any concentrations in excess of limitations imposed by any permit, law or regulation;
- 6. Any wastes, wastewaters or substances having a pH less than 5.0 or more than 11.5, or capable of causing damage or hazard to structures, equipment, processes or personnel of the sewer system, unless these limits are modified by permit.
- 7. Any liquid or vapor having a temperature higher than 65 degrees Celsius (149 degrees Fahrenheit) or containing heat in amounts which will inhibit biological activity, or result in interference at the treatment plant. In no case shall a discharge to the sewer system contain heat in such quantities that the temperature of the treatment plant influent exceeds 27 degrees Celsius (80 degrees Fahrenheit);
- **8.** Any material trucked or hauled from a cesspool, holding or septic tank or any other nondomestic source, except such material received at designated locations under City contract or permit in accordance with any other applicable requirements of the City Code 17.34 or rules adopted hereunder;
- **9.** Any substance which may solidify or become discernibly viscous at temperatures above 0 degrees Celsius or 32 degrees Fahrenheit;

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- 10. Any material that has not been properly comminuted to 0.65 centimeters (1/4 inch) or less in any dimension;
- 11. Any slugload, as defined in City Code 17.34 or rules adopted hereunder;
- 12. Any substances with excessive color, as determined by the Director of Environmental Services, which are not removed in the treatment process;
- 13. Any batch discharges without written permission from the Director of Environmental Services. Batch discharges shall comply with all other requirements of City Code 17.34 and rules adopted hereunder;
- **14.** Any concentrations of inert suspended or settleable solids which may interfere with the operation of the sewer system;
- 15. Any concentrations of dissolved solids which may interfere with the operation of the sewer system;
- 16. Any radioactive material, except in compliance with a current permit issued by the Oregon State Health Division or other state or federal agency having jurisdiction;
- 17. Any substance which may cause sewer system effluent or treatment residues, sludges, or scums, to be unsuitable for reclamation and reuse or which interferes with the reclamation process. (In no case, shall a substance discharged to the sewer system cause the City to be in noncompliance with sludge use or disposal criteria, guidelines or regulations developed under the Clean Water Act; any criteria, guidelines or regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act (42 USC 6901), the Clean Air Act (42 USC 1857), the Toxic Substances Control Act (15 USC 2601), or any other federal or State statutes, regulations or standards applicable to the sludge management method being used, or any amendments thereto.)
- **18.** Petroleum oil, nonbiodegradeable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.
- 19. Noncontact cooling water (except that noncontact cooling water may be discharged to the separate storm sewer system upon approval by the Director of Environmental Services);
- 20. Any substance that causes the City to violate the terms of its NPDES permit.

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Appendix 1 DEFINITIONS

Abbreviations

BOD₅ Five-day biochemical oxygen demand

mg/L Milligrams per liter

k Kilograms

m³/d Cubic meters per day

ppm Parts per million (assumed equal to milligrams per liter)

POTW Publicly owned treatment works WPCL Water Pollution Control Laboratory

Averages for BOD, TSS, and chemical parameters are based on arithmetic mean of samples taken.

Definitions

Bypass

The intentional diversion of wastestreams from any portion of a permittee's treatment facility.

Compatible Pollutant

Biochemical oxygen demand, suspended solids, pH and fecal coliform bacteria, and additional pollutants that the City treatment works is designed to treat.

Conventional Pollutants

Classification of industrial pollutants, which includes BOD (biochemical oxygen demand), suspended solids, fecal coliform, pH (acidity/alkalinity), and other pollutants so designated by EPA, as defined by Section 304(a)(4) of the Clean Water Act.

Director of Environmental Services

The Director of Environmental Services of the City of Portland, Oregon, or that person's duly authorized representative or agent.

City, or City of Portland

The municipality of Portland, Oregon, a municipal corporation of the State of Oregon, acting through the City Council or any board, committee, body, official, or person to whom the Council shall have lawfully delegated the power to act on behalf of the City. Unless a particular board, committee, official, or person is specifically designated in these rules and regulations, wherever action by the City is explicitly required or implied herein, it shall be understood to mean action by the Director of Environmental Services of Portland, Oregon, or that person's duly authorized representative or agent.

Expiration Date: Permit Number:

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Effective Date of this Permit

The date this permit is signed by the Director of the Bureau of Environmental Services.

Expiration Date

From 1 to 5 years beyond the effective date of this permit.

Hazardous or toxic substances

Hazardous or toxic substances are those substances referred to in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S. Code 9601 et seq.), section 502(13) of the Clean Water Act, and any other substances so designated by the Director of Environmental Services and contained in rules adopted pursuant to this Chapter.

Industrial Waste

Any liquid, solid, or gaseous substance (or combination thereof) resulting from any process of industry, manufacturing, commercial food processing, business, agriculture, trade, or research, including but not limited to the development, recovery, or processing of natural resources and leachate from landfills or other disposal sites.

Industrial Wastewater Discharge Permit

A permit to discharge industrial wastewater into the City sewer system issued under the authority of the City Code, which prescribes certain discharge requirements and limitation.

<u>Interference</u>

Interference means a discharge which, alone or in conjunction with a discharge or discharges from other sources, inhibits or disrupts the normal operation of the City sewer system, or which causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or any increase in the cost of treatment of sewage or in the cost of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations); Section 405 of the Clean Water Act, the Solid Waste Disposal Act (including Title II, more commonly referred to as the Resource Conservation and Recovery Act), and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of RCRA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Maximum Daily Discharge Limitation

The highest allowable daily discharge.

Nonconventional Pollutants

All pollutants that are not specifically designated as either conventional or toxic.

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Oil and Grease

Fats, Oils and Grease. Fats, oils and grease are those substances which are measured by USEPA Method 1664: N-Hexane Extractable Method (HEM) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM).

- (a) Non-polar fats, oils and grease are that portion of fats, oils and grease which is measured as non-polar (from petroleum sources) by USEPA Method 1664.
- (b) Polar fats, oils and grease are that portion of fats, oils and grease which is determined to be polar (of animal or vegetable origin) by USEPA Method 1664.

Pass Through

Pass through means a discharge which exits the POTW into waters of the United States in Quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

POTW

POTW means Publicly Owned Treatment Works, which includes any devices and systems, owned by a State or municipality, used in the collection, transportation, storage, treatment, recycling and reclamation of wastewater.

Pretreatment

The reduction of the amount of pollutants, the elimination of pollutants, or the alternation of the nature of pollutant properties in wastewater to a non-harmful state, prior to or in lieu of discharge of such pollutants into the City sewer system.

Sampling

- a. The "monthly average" other than pH is the arithmetic mean of samples collected during a calendar month.
- b. The "daily maximum" is defined as the greatest allowable value for any calendar day.
- c. The "four day average" is defined as the average of four discrete sampling events for a particular pollutant, which is determined by the sampling frequency and not necessarily four consecutive calendar days.
- d. A "composite sample" is a series of individual discrete samples taken at selected intervals based on either an increment of flow or time. The samples are mixed together to approximate the average composition of discharge to the City sewer system. A composite sample for one day shall consist of a pool of samples, collected over the operational period of the production day.

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e. A "Grab" sample is an individual sample collected in less than 15 minutes, without regard for flow or time.

f. A "Grab-Composite" is a minimum of four grab samples collected and preserved over a 24-hour period and combined to provide a representative sample of effluent being discharged.

Schedule of Compliance

A schedule of remedial measures, including an enforceable sequence of actions or operations leading to compliance with an effluent limitation or other limitation, prohibition, or standard.

Severe Property Damage

Substantial physical damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Slugload

A slugload is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge.

Solid Waste

Any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permits.

Solid Waste Disposal

The final placement of refuse that cannot be salvaged or recycled.

Solvent Management Plan

A plan that specifies the toxic organic compounds used, the method of disposal used (instead of dumping into wastestreams), and procedures for ensuring that toxic organics do not spill or leak into wastewater discharged to the City sewer system.

Total Dissolved Solids

The total dissolved (filterable) solids as determined by use of the method specified in the list of approved test procedures.

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Total Organic Active Ingredients

The sum of all organic active ingredients covered by the organic pesticide chemicals manufacturing subcategory, which are manufactured at a facility subject to the effluent guidelines for pesticides chemicals manufacturing.

Total Solids

The sum of dissolved and undissolved constituents in water or wastewater, usually expressed as milligrams per liter.

Total Suspended Solids

Total suspended matter that either floats on the surface or is in suspension in water or wastewater and that are removable by laboratory filtering (as described in *Standard Methods for the Examination of Water and Wastewaters*, current edition) or Guidelines Establishing Test Procedures for the analysis of Pollutants, contained in 40 CFR 136, as published in the *Federal Register*. (Bureau of Environmental Services Administrative Rules I[22])

Upset

"Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with applicable pretreatment standards, because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Waste

Unwanted materials left over from manufacturing processes, or refuse from places of human or animal habitation.

Wastewater

Industrial waste, sewage, or any other waste, including that which may be combined with any groundwater, surface water, or stormwater that may be discharged to the city sewer system.

Water Pollution

The addition of enough harmful or objectionable material to damage water quality.

Appendix 2 SAMPLING LOCATION MAP

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Appendix 2
SAMPLING LOCATION MAP

Appendix 2 SAMPLING LOCATION MAP

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Appendix 3 RESERVED: ACCIDENTAL SPILL PREVENTION PLAN

Submitted to BES August of 2006



Department of Environmental Quality

Northwest Region Portland Office Air Quality Program 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 (503) 229-5554

(503) 229-5554 FAX (503) 229-6945 TTY (503) 229-5471

FEB 1 2 2007

FEB 2 0 2007

Kinder Morgan Bulk Terminals, Inc. Attn: Gene Ellis 15550 N Lombard Street Portland, OR 97230

Re:

Renewal of Air Contaminant Discharge

PERMIT # 26-3071

The Department of Environmental Quality has completed processing your application for a renewal of your Air Contaminant Discharge Permit. Based on the material contained in the application we have issued the enclosed permit.

The effective date of the permit is the date it was signed by the regional Air Quality Manager. The signature and date appear on the first page of the document. The permit is issued pursuant to Oregon Revised Statutes 468A and Oregon Administrative Rules (OAR) 340-14-005 through 340-14-050, and 216-0010 through 216-0100.

You may appeal conditions or limitations contained in the attached permit by applying to the Environmental Quality Commission, or its authorized representative, within twenty days from the date of this letter. Appeals are pursuant to ORS Chapter 183 and OAR Chapter 340, Division 14-025(6). Appeal procedures are contained in OAR Division 11-005 through 11-140.

A copy of the current permit must be available at the facility at all times. Failure to comply with permit conditions may result in civil penalties. You are expected to read the permit carefully and comply with all conditions to protect the environment of Oregon.

If you have any questions, please contact Tina Leppaluoto at (503) 667-8414, extension 55020.

Sincerely,

Ed Dráback

Air Quality Manager

Northwest Region

CAW cab Enclosure

Cc:

AQ, NWR

Brent McMullin, Kinder Morgan Bulk Terminals, 101 E. 8th Street, Ste. 260, Vancouver, WA 98660-

3399

FEB 2 0 2007

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SIMPLE

AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality Northwest Region 2020 SW 4th Avenue, #400 Portland, Oregon 97201 (503) 229-5554

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

INFORMATION RELIED UPON:

Kinder Morgan Bulk Terminals, Inc.

15550 N. Lombard Street

Portland, OR 97203

Application No.:

021777

Date Received:

03/17/06

Additional Information through 11/7/06

PLANT SITE LOCATION:

LAND USE COMPATIBILITY FINDING:

15550 N. Lombard Street

Portland, OR 97203

Approving Authority: City of Portland Approval Date:

01/22/96

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Ed Druback, Northwest Region Air Quality Manager

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Table 1 Code	Source Description	SIC
Part B, 75	Source not elsewhere listed that would emit 10 tons/year if operated uncontrolled	
	Bulk fertilizer products marine terminal	4491

Permit Number: 26-3071 Expiration Date: 10/01/2011
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1.0 GENERAL EMISSION STANDARDS AND LIMITS

1.1. Visible Emissions

Emissions from any air contaminant source other than fuel burning equipment must not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.

1.2. Particulate Matter Emissions

Particulate matter emissions from any air contaminant source other than fuel burning equipment and fugitive emission sources must not exceed 0.1 grains per standard cubic foot

1.3. Fugitive Emissions

The permittee must take reasonable precautions to prevent fugitive dust emissions by:

- a. Treating vehicular traffic areas of the plant site under the control of the permittee.
- b. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.
- c. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.
- 1.4. Particulate Matter Fallout

The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. The Department will verify that the deposition exists and will notify the permittee that the deposition must be controlled.

1.5. Nuisance and Odors

The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

2.0 OPERATION AND MAINTENANCE REQUIREMENTS

2.1. Baghouses

The permittee must take the following actions to ensure proper operation of the baghouses.

- a. The permittee must check the pressure differential on each baghouse at the beginning of each shift and log any measurement outside the normal range (1-6" water column).
- b. The baghouses must be observed periodically during each work shift for any evidence of visible dust from the exhaust vents. If dust is observed, the permittee must take immediate action to determine the cause and affect a

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remedy.

c. The permittee must operate the baghouses at all transfer points in use when handling products not treated with a dust suppressant.

3.0 PLANT SITE EMISSION LIMITS

3.1. Plant Site
Emission Limits
(PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM_{10}	14	tons per year

3.2. Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period.

4.0 COMPLIANCE DEMONSTRATION

4.1. PSEL Compliance Monitoring

Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for PM₁₀:

4.2. Emission Factors

The permittee must use the default emission factors provided above for calculating pollutant emissions, unless alternative emission factors are approved by the Department. The permittee may request or the Department may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by the Department.

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5.0 RECORDKEEPING REQUIREMENTS

5.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

- a. Throughput of material by type, each batch, in tons;
- b. Number of transfer points passed for each batch of material;
- c. Monthly, perform a calculation of the 12-month PM₁₀ emission rate for the previous 12-month period.
- d. Major maintenance on the baghouses (i.e., changing more than 1/3 of the bags in a single baghouse), upon occurrence.
- e. Any instance of a baghouse operating outside normal parameters as stated in Condition 2.1.a.

5.2. Excess Emissions

211

र.चे स्थाप The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity for 30 seconds or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by the Department in accordance with OAR 340-214-0330(4).

5.3. Complaint Log

The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

5.4. Retention of Records

Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

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6.0 REPORTING REQUIREMENTS

6.1. Excess Emissions

The permittee must notify the Department of excess emissions events if the excess emission is of a nature that could endanger public health.

- a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 7.4 by e-mail, telephone, facsimile, or in person.
- b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
- c. The permittee must also submit follow-up reports when required by the Department.

6.2. Annual Report

For each year this permit is in effect, the permittee must submit to the Department by **February 15** two (2) copies of the following information for the previous calendar year:

- a. Operating parameters:
 - Summary of types and quantities of materials handled, including the number of transfer points each material type passed;
 - ii. Summary of rolling 12-month PM₁₀ emission rate calculations.
- b. Records of any baghouse(s) operating outside normal parameters and actions taken.
- c. Records of all planned and unplanned excess emissions events.
- d. A summary of complaints relating to air quality received by permittee during the year.
- e. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
- f. List major maintenance performed on pollution control equipment.

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6.3. Notice of Change of Ownership or Company Name

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity or facility.
- 6.4. Construction or Modification Notices

The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

- a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
- b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
- c. Constructing or modifying any air pollution control equipment.
- 6.5. Where to Send Reports and Notices

-

The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the region where the source is located as identified in Condition 7.3.

7.0 ADMINISTRATIVE REQUIREMENTS

7.1. Permit Renewal Application

The completed application package for renewal of this permit is due on **August 1, 2011**. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in condition 7.3

7.2. Permit Modifications

Application for a modification of this permit must be submitted not less than 60 days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.

7.3. Permit
Coordinator
Addresses

All reports, notices, and applications should be directed to the Permit Coordinator for DEQ's Northwest Region office:

Page 8 of 10

Department of Environmental Quality Northwest Region 2020 SW 4th Avenue, Suite 400 Portland, OR 97201-4987 Telephone: (503) 229-5582

7.4. Department Contacts

Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at www.deq.state.or.us. All inquiries about this permit should be directed to the office listed below, unless otherwise notified.

Department of Environmental Quality East Side Office 1550 NW Eastman Parkway, Suite 290 Gresham, OR 97230 Telephone: (503) 667-8414

8.0 FEES

8.1. Annual Compliance Fee

The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Standard ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date.

8.2. Change of
Ownership or
Company Name
Fee

The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.

8.3. Special Activity Fees

The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.

8.4. Where to Submit Fees

Fees must be submitted to:

Department of Environmental Quality Business Office 811 SW Sixth Avenue Portland, Oregon 97204-1390

Permit Number: 26-3071 Expiration Date: 10/01/2011 Page 9 of 10

GENERAL CONDITIONS AND DISCLAIMERS 9.0

9.1	. Permitted Activities	This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.
9.2.	Other Regulations	In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.
9.3.	Conflicting Conditions	In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
9.4.	Masking of Emissions	The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
	Department Access	The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
9.6.	Permit Availability	The permittee must have a copy of the permit available at the facility at all times.
9.7.	Open Burning	The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.
9.8.	Asbestos	The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.
9.9.	Property Rights	The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
9.10.	Termination, Revocation, or Modification	The Department may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

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ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge	NSR	New Source Review
	Permit	O_2	oxygen
ASTM	American Society for Testing and Materials	OAR	Oregon Administrative Rules
4 O M	Air Quality Maintenance Area	ORS	Oregon Revised Statutes
AQMA	-	O&M	operation and maintenance
calendar year	The 12-month period beginning January 1st and	Pb	lead
	ending December 31st	PCD	pollution control device
CFR	Code of Federal Regulations	PM	particulate matter
CO	carbon monoxide	PM_{10}	particulate matter less than 10
DEQ	Oregon Department of	•	microns in size
	Environmental Quality	ppm	part per million
dscf	dry standard cubic foot	PSD	Prevention of Significant
EPA	US Environmental Protection	200	Deterioration
-a.	Agency	PSEL	Plant Site Emission Limit
FCAA	Federal Clean Air Act	PTE	Potential to Emit
gal	gallon(s)	RACT	Reasonably Available Control
gr/dscf	grains per dry standard cubic foot	C	Technology
		scf	standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-	SER	Significant Emission Rate
	0040	SIC	Standard Industrial Code
I&M	inspection and maintenance	SIP	State Implementation Plan
1b	pound(s)	SO_2	sulfur dioxide
MMBtu	million British thermal units	Special Control	as defined in OAR 340-204- 0070
NA	not applicable	Area	0070
NESHAP	National Emissions Standards	VE	visible emissions
	for Hazardous Air Pollutants	VOC	volatile organic compound
NO_X	nitrogen oxides	year	A period consisting of any 12-
NSPS	New Source Performance Standard	,	consecutive calendar months

Review Report/Permit No.: 26-3071 Application number: 021777

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Department of Environmental Quality Northwest Region Air Quality Program

SIMPLE AIR CONTAMINANT DISCHARGE PERMIT REVIEW REPORT

Kinder Morgan Bulk Terminals, Inc. 15550 N. Lombard Street Portland, OR 97203 (503) 285-4200

Unassigned emissions	
Emission credits	
Source test	
COMS	
CEMS	
Compliance schedule	
Special conditions	
Annual report	X
Semi-annual report	
Quarterly report	

Monthly report	
Excess emissions report	
NSPS	
NESHAP	
NSR	
PSD	·
RACT	,
FCE	
Public Notice	П

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PERMITTING

PERMITTING ACTION

1. The permit is a renewal for an existing Air Contaminant Discharge Permit (ACDP) which was issued on 7/11/02 and was originally scheduled to expire on 6/1/06. Addendum 1 was issued on 1/18/05 to update emission factors.

2. This facility originally had a Standard permit due to the complexity of the compliance demonstration method contained in the permit. With the issuance of Addendum 1, the compliance demonstration has become much less complex, using one emission factor for facility throughput instead of individual emission factors for each drop point in the process. With this renewal, the permit is changed to a Simple.

OTHER PERMITS

3. Other permits issued or required by the Department of Environmental Quality for this source include a NPDES permit, OR 003105-4 for discharges to surface water.

ATTAINMENT STATUS

4. The source is located in a maintenance area for CO and Ozone. NO_X and VOC are precursors to Ozone. The facility does not emit these criteria pollutants.

SOURCE DESCRIPTION

OVERVIEW

- 5. The permittee operates a bulk fertilizer products marine loading facility at the Port of Portland's Terminal 5. The facility primarily handles potash, sulfate of potash, urea, and soda ash. Construction of the facility began in 1986 by the Port of Portland and was abandoned in 1992. Construction resumed in 1996 by the permittee and was completed in 1997.
- 6. No changes have been made to the facility since the last permit renewal.
- 7. The permittee is in the process of increasing the size of the storage building and extending the conveyor inside the building. A third loop rail track will be added as well. These changes are scheduled to be completed in 2007.

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PROCESS AND CONTROL DEVICES

8. Existing air contaminant sources at the facility consist of the following:

Process	Baghouses	Max. Speed	Installed
Ship loader	2	19,250 CFM	2000
Bottom dump	2, with cyclones	27,100 CFM	2000
Tower 3	1, with cyclone	11,000 CFM	2000
Tower 4	1, with cyclone	10,000 CFM	2000
Tower 5	1, with cyclone	10,000 CFM	2000
Tower 6	1, with cyclone	13,000 CFM	2000
Tower 7	1	5,000 CFM	2000
Fugitives	Ship loading and ma	terials handling	n/a

COMPLIANCE

- 9. The facility was inspected on 9/9/05 and found to be in compliance with permit conditions.
- During the prior permit period no air quality related complaints were recorded for this facility. Two complaints related to water quality were received and forwarded to that section for resolution.
- 11. No enforcement actions have been taken against this source since the last permit renewal.

EMISSIONS

12. Proposed PSEL information:

		Nettin	g Basis	Plant Site	Emission Lim	its (PSEL)
Pollutant	Baseline Emission Rate (tons/yr)	Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM ₁₀	0	0	0	14	14	. 0

- a. The proposed PSEL is equal to the Generic PSEL in accordance with OAR 340-216-0064(4)(b) and the netting basis is zero in accordance with OAR 340-222-0040(2).
- b. This facility has no industrial heat source and all emissions other than fugitives are through baghouses. Thus only PM_{10} is needed in the PSEL.

Page 4 of 5

- c. Actual emissions at this facility are less than 1 ton per year PM_{10} .
- d. The PSEL is a federally enforceable limit on the potential to emit.

SIGNIFICANT EMISSION RATE ANALYSIS

13. For each pollutant, the proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.

MAJOR SOURCE APPLICABILITY

CRITERIA POLLUTANTS

14. A major source is a facility that has the potential to emit 100 tons or more per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions. Actual emissions are less than one ton/year of PM_{10} .

HAZARDOUS AIR POLLUTANTS

15. A major source is a facility that has the potential to emit 10 or more tons/year of any single HAP or 25 tons/year of combined HAPs. This facility is not a source of hazardous air pollutants.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

16. There are no sources at this facility for which NSPS standards have been promulgated.

NESHAPS/MACT APPLICABILITY

17. There are no sources at this facility for which NESHAPS/MACT standards have been promulgated.

RACT APPLICABILITY

18. The facility is located in the Portland AQMA, but it is not one of the listed source categories in OAR 340-232-0010, thus the RACT rules do not apply.

Page 5 of 5

TACT APPLICABILITY

19. The source is meeting the states TACT/Highest and Best Rules by controlling all transfer points with a cyclone/baghouse system.

PUBLIC NOTICE

20. Pursuant to OAR 340-216-0066(4)(a)(B), issuance of Simple Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(c), which requires that the Department provide notice of the proposed permit action and a minimum of 30 days for interested persons to submit written comments. In accordance with these rules, this permit and draft report were made available for public comment from December 29, 2006 until January 31, 2007, 5pm. No comments were received from the public.

kka:ggg 2/8/2007

Facility ID Number:

065241

2008

OREGON STATE FIRE MARSHAL HAZARDOUS SUBSTANCE INFORMATION SURVEY

ECTION A	HAZARDOU	S SUBSTANCE	PRESEN	CE Check the corr	ect box to	the left.					
YES NO YES NO YES NO YES NO	 Were Extre Is this faci 	emely Hazardous lity subject to the	Substanc reporting	at this site in reportables (EHS) present at this requirements of Sectic Safety Management (P	s site at or in 112(r) o	above the f the Clea	threshold plann n Air Act?	ing quantities	s during this sur	rvey p	eriod?
ECTION B	DEMOGRAF	PHIC DATA	Cross off	the old or incorrect info	ormation a	nd type or	print changes	or additions in	n the shaded a	reas.	
NAICS CODE 1	: 488320		MARINE C	ARGO HANDLING							
NAICS CODE 2		DEFINITION:	TERMAN	U ODEDATOR CTEM		^******					
1 /2 h h		A COLUMNIA MANAGEME	LEHIMMA	AL OPERATOR STEV	EDUKE CI	JIMPANY					6405.55
KINE	DER	MORGA	M	NC	3776 3776						
		TERM	IINALS								
· F	Portland Bulk	Terminals								Hamara Hamara	
	Jack Wa Terminal Ma	l iler Dager			101 (2.4) 101 (2.4)					SAG SKR JEISTER PALIKOSS	
550 N. Lombard rminal 5					to. Maili		ESS: 15550 N l	OMBARDI	row s		
rtland, OR 97203 llerj@kindermorgan	i.com	Office: 503-285. Fax: 503 Cell: 503.	-4200 x,40 -285-7733 -807-9686		2.00 (1) (270)						
COUNTY: MUI	LTNOMAH		Blackyyen								
STATE: OR	ZIF	CODE: 97203	2100.000 ¥ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		STAT	E: OR	ZIPC	ODE: 97203			
							NE: 503-285-4				
			•				REET #: 07507				
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				ENIERGENOT CONTAC							
				EMERGENCY CONTAC			503-285-4200	14912174029-111121414 <u>11</u> 1112141488	NIGHT: 503-8 1	6-526) 1
755 PO	≨£					APACE OF LOSS				NATEUR Maria	
PORTL			16.	RESPONSIBLE FIRE D	EPARTMEN	IT: PORT	LAND BUREA	U OF F&R&I	EMS	90305345MA984	(761)181181181
> 2	:		4=						in and the second	in i	
Val			17.	WRITTEN EMERGENC	Y PLAN? II	· YES, WH	EHE AT SITE:	ALCON ESCRETAR	Y (K Ç	ES (□ NO
OR OR	RGAN		18.	AUTOMATIC FIRE SUP	PRESSION	SYSTEM	PRESENT?		Υ □	FS 1	⊠ NO
80 TR 97203	B			ARE STORAGE BUILDIN)BDJNG TO NE			☐ NO
MBARD FRM OR 97203	BULK			ARE OTHER TYPES OF			- 141 11 (2 -2 7 1 - 2 4 4	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Y		ĭ ⊠ NO
رن ح							BEDOOLLOG			,	•
	B		5 1 4		SECTI	ONC	PERSON CO	<u>)MPLETING</u>	<u>FORM</u>		
	Į.			e Required: at the information	1. PRIN	IT NAME:	<u>JACK</u>	<u> 4UV _</u>	IJER		
	ST		provided is	true and accurate to my knowledge. This	2 SIGN	JATURE (re	aquirad):	4 1 1	ハん	į	
	TERMINALS INC		person will	be contacted to answer ons needing clarification.	3. DATI	1 de	$ \sqrt{\phi} $ PHONE	503-28	S EXT:	4	d
					Foi	office use	e only: R	F DE		C	

Retain a copy of this survey at this facility for 3 years.

Return survey to: OSFM Survey Processing Unit, 4760 Portland Rd NE, Salem, OR 97305

Chemical Form

2008 OREGON STATE FIRE MARSHAL Hazardous Substance Information Survey or incorrect information and type or print changes or additions in the

Facility ID Number

065241

SECTION	Cross off the old or in	correct information and t	ype or print change	o or additions in the pro-	Motodj utod:
Common Name	or Trade Name: ACETYLENE				
	ardous Ingredient: ACETYLENE				
No Longer Reportable 112R EHS PSM 1-Pure 2-Mixture	Physical Units of Avg Amt State Measure Code Use Table II Use Table III 3 3 1 10	Max Amt	On Site Use Tabl	e IV & V Table VI if known	CAS No. if known
LOCATION					Loc Max
In/Out Delete I Delete I Delete	Building MAINT SHOP	Floor 1 NA	Area	Room SHOP	Quadrant Use Table III NE 01
Delete					
Common Name	e or Trade Name: ARGON 75%/ 0	CARBON DIOXIDE 25%			
	ardous Ingredient: ARGON				
No Longer Reportable 112R EHS PSM	3 3 04	Max Amt	On Site Use Tab	le IV & V Table VI if known	CAS No. if known
2 1-Pure 2 2-Mixture					
				- I Good Eastern Comment Land	
LOCATION				• M. Service of Service Control of the control of t	Loc Max
LOCATION In/Out Delete I	Building MAINT SHOP	Floor 1 NA	Area	Room SHOP AREA	Quadrant Use Table III NE 00 [1]
LOCATION In/Out Delete		, ,	Area	,	Quadrant Use Table III
LOCATION In/Out Delete I	MAINT SHOP	, ,	Area	,	Quadrant Use Table III
LOCATION In/Out Delete	MAINT SHOP	1 NA 1 [1] [NA	Area	,	Quadrant Use Table III
LOCATION In/Out Delete Delete Common Name	MAINT SHOP [1 NA [Area C	,	Quadrant Use Table III
LOCATION In/Out Delete	E or Trade Name: DIESEL 2 ardous Ingredient: PETROLEUM Physical Units of Avg Amt State Measure Code	1 NA [[] IT Days Storag On Site Use Tab	SHOP AREA SHOP AREA When the state of the	Quadrant Use Table III NE OO COO COO COO COO COO COO COO
LOCATION In/Out Delete	e or Trade Name: DIESEL 2 ardous Ingredient: PETROLEUM Physical Units of State Measure Use Table II Use Table III 2 2 2 11 [1]	DISTILLATES Max Amt Amt IN Code Code Code Use Table III Use Table III Use Table III Use Table III Code Code Code Code Code Code Code Code	Con Site Ouse Tab a digits A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	e Code Hazard Class I UN/NA if known 4 3.3	Quadrant Use Table III NE 00 CONTROL CONTROL CAS No. if known CONTROL CONTR
LOCATION In/Out Delete	E or Trade Name: DIESEL 2 ardous Ingredient: PETROLEUM Physical Units of Measure Use Table III Use Table II Use Table III	DISTILLATES Max Amt Amt IN Code Code Use Table III Use Table III Use Table III Floor Floor PORTA	T Days Storago On Site Use Tab	SHOP AREA [Quadrant Use Table III NE 00 Constitution of the constitution of
LOCATION In/Out Delete	E or Trade Name: DIESEL 2 ardous Ingredient: PETROLEUM Physical Units of Avg Amt State Measure Use Table I Use Table III 2 2 2 11 Building MAINT Building	DISTILLATES Max Amt Amt IN Code Code Use Table III Use Table III Use Table III Code Use Table III Code Code Use Table III Code Code Code Code Use Table III Code Code Code Use Table III Code Code Code Use Table III Code Code Code Use Table III Code Code Code Code Code Code Use Table III Code Code Code Code Code Code Code Code	Days Storage On Site 3 digits A 1 [] [] [] [] [] Area	SHOP AREA	Quadrant Use Table III NE 00 CONTROL CAS No. if known CA
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Chemical Form

2008 OREGON STATE FIRE MARSHAL

Facility ID Number

065241 Hazardous Substance Information Survey

Cross off the old or incorrect information and type or print changes or additions in the [bracketed] area.

Common Name o	or Trade Name: GASOLINI	E UNLEADED						
	dous Ingredient:PETROLE	UM DISTILLATES						
No Longer Reportable 112R EHS PSM 1-Pure 2-Mixture	Physical Units of State Measure Cooluse Table I Use Table II Use Table	de Code Co ble III Use Table III Use Ta	de Code On able III Use Table III 3 d	ays Storage C Site Use Table I ligits A 1		UN/NA if known	EPA Pesticide Regis CAS No.	
LOCATION				iosid Leil Leil -		le epigedet zitt	III Leiddeadd arthadd o fillio	
In/Out Delete O [Building MAINT SHOP	Floor	Area FENCED F	ueling	Roo 40FT CON	m TAINEI	Quadrant R. NE []	Loc Max Use Table III 10 [
Delete								
Common Name of	or Trade Name: HYDRAUL	IC OIL						
	lous Ingredient:BASE LUE	BRICATING OILS						
No Longer Reportable 112R EHS PSM	Physical Units of Avg A State Measure Use Table I Use Table it Use Table 2 2 04	de Code Co bie III Use Table III Use Ta	de Code On able III Use Table III 3 d	ays Storage C Site Use Table I ligits D 1		if known	EPA Pesticide Regis	if known
1-Pure []			0 10 3][][65 [] []		1270 []	6474254 [! 7
LOCATION								Loc Max
LOCATION In/Out	Building NEAR MAINT	Floor	O LO S Area WITHIN C		Roo NA		6474254 [Quadrant NE	
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LOCATION In/Out Delete Delete Common Name of Hazaro	Building NEAR MAINT] [] Area				Quadrant	Loc Max Use Table III
LOCATION In/Out Delete Delete Delete Common Name of	Building NEAR MAINT Or Trade Name: OXYGEN Ious Ingredient: OXYGEN Physical Units of Avg A State Measure Cod	Floor Floor Floor Code Code Code Use Table III Floor Floor Floor Code Use Table III	Area WITHIN C		NA Code Hazard Class	m	Quadrant	Loc Max Use Table III O4 [] stration No:
LOCATION In/Out In/O	Building NEAR MAINT Trade Name: OXYGEN For Trade Nam	Floor Floor Floor Cote Cote Cote Cote III Use Table III Use Table III Use Table III Cote Cote Cote III Use Table	Area WITHIN C	A CONTAINR CONT	Code Hazard Class V & V 4 5 . 1 [UN/NA if known 1072	Quadrant NE Quadrant NE CAS No. 7782447	Loc Max Use Table III O 4 [] [] stration No: if known 7 Loc Max
LOCATION In/Out In/O	Building NEAR MAINT Trade Name: OXYGEN For Trade Name: OXYGEN OUSE Ingredient: OXYGEN Weasure Use Table II	Floor Floor Floor Code Code Code Use Table III Floor Floor Floor Code Use Table III	Area WITHIN C	ONTAINR ONTAINR ONTAINR Customatic state of the state	Code Hazard Class V & V 4 5 . 1	m UN/NA if known 1072	Quadrant NE [Cas No.	Loc Max Use Table III O 4 [] [] stration No: if known 7
LOCATION In/Out Delete Delete Common Name of Hazard No Longer Reportable 112R EHS PSM 11-Pure 2-Mixture [-] LOCATION In/Out	Building NEAR MAINT Trade Name: OXYGEN For Trade Name: OXYGEN OUSE Ingredient: OXYGEN Physical Units of Avg A Cod State Use Table Us	Floor Floor Floor Cote Cote Cote Cote III Use Table III Use Table III Use Table III Cote Cote Cote III Use Table	Area WITHIN C LIN Amt OUT D de Code On able III Use Table III 3 c	ONTAINR ONTAINR ONTAINR Customatic state of the state	Code Hazard Class V & V 4 5 . 1 [] [] 2 . 2 [] [] Roo	m UN/NA if known 1072	Quadrant NE Quadrant NE CAS No. 7782447	Loc Max Use Table III O 4 [] stration No: if known Loc Max Use Table III

Chemical Form

2008 OREGON STATE FIRE MARSHAL Hazardous Substance Information Survey

Facility ID Number

Cross off the old or incorrect information and type or print changes or additions in the [bracketed] area. SECTION D Common Name or Trade Name: POTASH Hazardous Ingredient: POTASSIUM CHLORIDE ☐ No Longer Reportable Amt IN Amt OUT Days Hazard Class UN/NA EPA Pesticide Registration No: **Physical** Units of Avg Amt Max Amt Storage Code 112R Use Table IV & V Table VI State Measure Code Code Code Code On Site if known Use Table II Use Table III Use Table III Use Table III Use Table III Use Table I 3 digits R 1 4 9.0 EHS CAS No. if known PSM 7447407 80 80 99 99 365 1-Pure 2-Mixture LOCATION Loc Max In/Out Building Room Quadrant Use Table III Floor Area STORAGE 80 Delete THROUGHOUT ALL I Delete Delete Common Name or Trade Name: PROPANE Hazardous Ingredient: PROPANE No Longer Reportable UN/NA EPA Pesticide Registration No: Physical Units of Avg Amt Max Amt Amt IN Amt OUT Days Storage Code Hazard Class ☐ 112F Use Table IV & V Table Vi State Measura Code Code Code Code On Site if known Use Table I Use Table II Use Table III Use Table III Use Table III Use Table III 3 digits 2 6.3 EHS] [] [CAS No. if known ☐ PSM 2 03 365 2.1 1978 74986 3 03 10 10 1-Pure 2-Mixture LOCATION Loc Max In/Out Building Floor Area Quadrant Use Table III Room Delete MAINT NEAR DOORWAY SHOP NE 00 Delete Delete Common Name or Trade Name: SYNTHETIC GEAR LUBE Hazardous Ingredient: SYNTHETIC HYDROCARBON BASE OIL No Longer Reportable Storage Code EPA Pesticide Registration No: Physical Units of Avg Amt Max Amt Amt IN Amt OUT Days Hazard Class UN/NA 112R Use Table IV & V Table VI State Measure Code Code Code Code On Site if known Use Table II Use Table III Use Table III Use Table III Use Table III 9.0 Use Table I 3 digits Ε 4 EHS CAS No. if known ☐ PSM 04 04 04 365 16958922 2 2 03 1-Pure 2-Mixture LOCATION Loc Max In/Out Building Floor Room Quadrant Use Table III Area Delete Ι MAINT CONTAINER 1 CONTAINER ADJ TO SHOP 01 Delete Delete

Chemical Form

2008 OREGON STATE FIRE MARSHAL Hazardous Substance Information Survey

Facility ID Number

065241

SECTION D Cross off the old or incorrect information and type or print changes or additions in the [bracketed] area. Common Name or Trade Name: WASTE OIL Hazardous Ingredient: PETROLEUM HYDROCARBONS No Longer Reportable Physical Units of Avg Amt Amt OUT Max Amt Amt IN Days Storage Code UN/NA EPA Pesticide Registration No: Hazard Class □112R State Measure Code Code Code Code On Site Use Table IV & V Table Vi if known Use Table I Use Table II Use Table III Use Table III Use Table III Use Table III EHS 3 digits 4.5 1 4 CAS No. if known PSM 2 2 04 04 04 365 04 6.4 1-Pure L **LOCATION** Loc Max In/Out Building Floor Area Room Quadrant Use Table III Delete 0 MAINT SHOP BARRELS & TANK NA 01 Delete Delete

NDUSTRY NAME:	Kinder Morgan Bulk Term. 5	For Industrial Source Control Division Use Only Org. ID# -25447
ERMIT NUMBER:	400.132	Date Postmarked/Received Date Entered
EPORT DUE DATE:	February 15, 2008	
AMPLING PERIOD:	January 2008	Comments:

SAMPLE DATE	POINT OF	COMPLIANCE	SAMPLE TYP	
01/28/08		1A	GRAB	
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA	in a product of the first state of the first	LIMITS COMMENTS DAILY MONTHLY
HEM Oil & Grease (Total) ¹	EPA 1664	7.36 m	ng/L	NA NA
HEM Oil and Grease (Non-Polar)	EPA 1664	4.58 m	ng/L.	110 mg/L N/A
οH	EPA 150.1	6.97 SI	U	5.0 - 11.5 N/A

If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF C	OMPLIANCE	SZ	MPLE TYPE			
01/28/08		1A	(COMPOSITE	-		
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	LI DAILY	MITS MONTHLY	COMMENTS
low		2321 ga	al/day		N/A	NA	
rds	SM 2540C	45,000 m	g/L		N/A	NA	
IDS _(calculated)	Calculated	867 lb	s/day		1721 lbs/day		
Linc (Total)	EPA 200.8	.515 m	g/L		3.7 mg/L	N/A	

ertify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that alified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly ponsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are nificant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

gnature:

Date:

Worddata\Environmental\08 SMR.DOC

•		For Industrial Source Control Division Use Only
INDUSTRY NAME:	Kinder Morgan Bulk Term. 5	Org. 1D# -25447
		Date Postmarked/Received Date Entered
PERMIT NUMBER:	<u>400.132</u>	
REPORT DUE DATE:	February 15, 2009	
		Entered By
SAMPLING PERIOD:	January 2009	Comments:

SAMPLE DATE	POINT OF COMPLIANCE		SAMPLE TYPE				
· · · · · · · · · · · · · · · · · · ·		1A	GI	RAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA	1967年1月1日 - 日本 1月1日 1月1日 1月1日 1月1日 1日	MDL	DAHLY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) !	EPA 1664	7.04 m	g/L		-N/A	N/A	
HEM Oil and Grease (Non-Polar)		m	g/L		110 mg/L	N/A	N/A - total 0+G below 110mg/L
рЦ	EPA 150.1	6.97 st	J		5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF	COMPLIANCE	SA	MPLE TYPE			
		1A	C	OMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORT CONCENTR		MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		962	gal/day		N/A	N/A	
TDS	5 M 2540 C	200	mg/L		N/A	NA	
TDS _(calculated)	Calculated	320	lbs/day		3500 lbs/day		
Zinc (Total)	EPA 200.8	.237	mg/L		3.7 mg/L	N/A	

l certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly esponsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date

ate: 21

INDUSTRY NAME:	Kinder Morgan Bulk Term. 5	For Industrial Source Control Division Use Only Org. ID# -25447			
INDUSTRI MAMD.	Minder Worgan Bank Term. 5	Date Postmarked/Received			
PERMIT NUMBER:	<u>400.132</u>	-			
REPORT DUE DATE:	February 15, 2010		Entered By:		
SAMPLING PERIOD:	January 2010	Comments:			
	•				

SAMPLE DATE/ TIME	POINT OF (COMPLIANCE	SAN	MPLE TYPE			
01/27/10 @ 10:45 AM		1A		GRAB			
PARAMETER_	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	L DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) 1	EPA 1664	ND mg	g/L		N/A	N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	ND mg	g/L		110 mg/L	N/A	
pH	M4500H	6.0 SU	J		5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE/ TIME	POINT OF C	COMPLIANCE	SA	MPLE TYPE			
01/27/10 @ 10:45 AM		1A	C	OMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORT CONCENTR	days to the same of	MDL	LI DAH.Y	MITS MONTHLY	COMMENTS
Flow		5840	gal/day		N/A	N/A	
TDS	E160.1	34200	mg/L		N/A	N/A	
TDS _(calculated)	Calculated	1667.97	lbs/day		3500 lbs/day		
Zinc (Total)	EPA 200.7	.01	mg/L		3.7 mg/L	N/A	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date:

		For Industrial Source Control Division Use Only
INDUSTRY NAME:	Kinder Morgan Bulk Term. 5	Org. ID# -25447
PERMIT NUMBER:	<u>400.132</u>	Date Postmarked/Received Date Entered
REPORT DUE DATE:	May 15, 2008	
SAMPLING PERIOD:	April 2008	Entered By Comments:
		 - Programme and the second of t

SAMPLE DATE	POINT OF	COMPLIANCE	SAN	PLE TYPE	
04/29/08		lA .		GRAB	
PARAMETER	ANALYSIS METHOD	REPORTI CONCENTRA		MDL.	LIMITS COMME DAILY MONTELY
На	EPA 150.1	7.72 S	U	· in	5.0 11.5 N/A

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF	COMPLIANCE	SA	AMPLE TYPE			
04/29/08		1A	(COMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORTI CONCENTRA		MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow	Grab	2284 g	al/day		N/A	N/Ā	
TDS	SM 2540C	64000 п	ıg/L		N/A	NA.	
TDS _(celculated)	Calculated	1219 II	s/day	·	1721 lbs/day	N/A	
Zinc (Total)	EPA 200.8	ND n	ıg/L		3.7 mg/L	Colorador VIII de la Colorada de la	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Jens Ellis Date: 5/13/08

		For Industrial Source (Control Division Use Only	y
INDUSTRY NAME:	Kinder Morgan Bulk Term. 5	Org. IJ	O# -25447	1.11
		Date Postmarked/Received	Date Entered	
PERMIT NUMBER:	400.132			
DEDODE NUE NATE.	M15 2000			
REPORT DUE DATE:	May 15, 2009		Entered By:	100 mg
SAMPLING PERIOD:	April 2009	Comments:		
		The second was a transfer of the second second		
		All the state of the state of the state of		

SAMPLE DATE	POINT OF C	COMPLIANCE	S	AMPLE TYPE			
04/29/09		lA		GRAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	L DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) 1	EPA 1664	ND m	g/L,		N/A	N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	ND m	g/L		110 mg/L	N/A	
pH	EPA 150.1	6.87 S	U	1.3	5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF C	OMPLIANCE	SA	MPLE TYPE			
04/29/09		1A	[c	COMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow	Grab	6551 g	al/day		N/A	N/A	
TDS	EPA 160.1	246 n	ıg/L		N/A	N/A	
TDS _(calculated)	Calculated	13.45 lt	s/day		1721 lbs/day	N/A	
Zinc (Total)	EPA 200.7	.75 n	ıg/L		3.7 mg/L	N/A	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date:

Form 13-1A

INDUSTRY NAME:	Kinder Morgan Bulk Term. 5		Control Division Use Only D# -25447
		Date Postmarked/Received	Date Entered
PERMIT NUMBER:	400.132		
REPORT DUE DATE:	May 15, 2010		Entered By:
SAMPLING PERIOD:	April 2010	Comments:	

SAMPLE DATE/ TIME	POINT OF C	COMPLIANCE	SAMP	LE TYPE			
04/08/10 @ 1306		1A	G	RAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	LEMIT DAILY M	S ONTHLY	COMMENTS
HEM Oil & Grease (Total).1	EPA 1664	<u>119</u> m	g/L		N/A	NA	
HEM Oil and Grease (Non-Polar)	EPA 1664 SGT	86.2 m	g/L	_	110 mg/L	N/A	
pH	EPA 150.1	7.24 St	U		5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE/TIME	POINT OF C	COMPLIANCE	SAMPLE TYP	E .				
04/08/10 @ 1252		lA	COMPOSITI	E				
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA	A 1 A 4 A 4 A 4 A 4 A 4 A 4 A 4 A 4 A 4	1	L) DAILY	MITS MONTHLY	COMMENTS	1. mg
Flow	Grab	5249 g	al/day	e j	· N/A	N/A		
TDS	SM2540C	43400 п	ng/L		N/A	N/A		
TDS _(calculated)	Calculated	1901.15 II	os/day		3500 lbs/day	N/A		
Zinc (Total)	EPA 200.8	.903 n	ıg/L	1 15 1	3.7 mg/L	N/A		

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Signature:

Date: 5319

INDUSTRY NAME:	Kinder Morgan Bulk Term. 5	Org. ID# -25447	шу
		Date Postmarked/Received Date Entered	
PERMIT NUMBER:	<u>400.132</u>		
REPORT DUE DATE:	August 15, 2008		
SAMPLING PERIOD:	<u>July 2008</u>	Comments:	el de la serie
		The Control of the Co	

SAMPLE DATE	POINT OF	COMPLIANCE	s	AMPLE TYPE	
07/24/08		1A		GRAB	
PARAMETER	ANALYSIS METHOD	REPORTI CONCENTRA	Arrangers of the	MDL	LIMITS COMMENTS DAILY MONTHLY
HEM Oil & Grease (Total) ¹	EPA 1664	36.7 n	ıg/L		N/A N/A
HEM Oil and Grease (Non-Polar)	EPA 1664	26.8 n	ıg/L		N/A 110 mg/L
pH	EPA 150.1	7.49 S	U		5.0 - 11.5 N/A

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF C	COMPLIANCE	SA	MPLE TYPE		
07/24/08		1A	C	COMPOSITE		
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL		MITS COMMENTS MONTHLY
Flow		6327 g	al/day		N/A	N/A
TDS	SM 2540C	55800 m	ıg/L		N/A	NA S
TDS _(calculated)	Calculated	2943 lt	s/day		3500 lbs/day	N/A
Zinc (Total)	EPA 200.8	.47 m	g/L	-	3.7 mg/L	VA

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Date:

F. ... 17 14

INDUSTRY NAME:	Kinder Morgan Bulk Term, 5	For Industrial Source Org	ce Control Division Use Only . ID# -25447
		Date Postmarked/Received	Date Entered
PERMIT NUMBER:	400.132		
REPORT DUE DATE:	August 15, 2009		Entered By:
SAMPLING PERIOD:	July 2009	Comments:	

SAMPLE DATE	POINT OF C	COMPLIANCE	S	AMPLE TYPE			
07/28/09		1A		GRAB			
PARAMETER	ANALYSIS METHOD	REPORTI CONCENTRA		MDL	DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) ¹	EPA 1664	13.4 n	ıg/L	1	N/A	N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	6.40 n	ng/L		110 mg/L	N/A	
pH	SM 4500-H+B	6.8 S	U	A	5.0 - 11.5	NA	

If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and 1. Grease Non-Polar constituent.

SAMPLE DATE	POINT OF C	OMPLIANO	E SA	MPLE TYPE			
07/28/09		1 A	C	OMPOSITE			
PARAMETER	ANALYSIS METHOD	REPO CONCENT	RTED FRATION	MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		4237	gal/day		N/A	N/A	
TDS	E160.1	238	mg/L		N/A	N/A	·
TDS _(calculated)	Calculated	8.416	lbs/day		3500 lbs/day	N/A	
Zinc (Total)	EPA 200.7	.0374	mg/L		3.7 mg/L	NA	

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INDUSTRY NAME: Kinder Morgan Bulk Term. 5

Kinder Morgan Bulk Term. 5

Org. 1D# -25447

Date Postmarked/Received Date Entered

PERMIT NUMBER: August 15, 2010

Entered By:

Comments:

SAMPLE DATE/ TIME	POINT OF C	COMPLIANCE	SA	MPLE TYPE			
07/08/10 @ 14:01		lA		GRAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	LI DAILY	MITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) 1	EPA 1664	ND m	g/L		N/A	N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	ND m	ıg/L		110 mg/L	N/A	
pН	EPA 150.1	6.78 S	U		5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE/TIME	POINT OF C	OMPLIANCE	SA	MPLE TYPE			
07/09/10 @ 14:44		lA	C	COMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORT CONCENTR		MÐL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		4028	gal/day		N/A	N/A	
TDS	E160.1	95,700	mg/L		N/A	N/A	
TDS _(calculated)	Calculated	3217.0	lbs/day		3500 lbs/day	N/A	
Zinc (Total)	EPA 200.8	4.49	mg/L		3.7 mg/L	N/A	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date:

Form 13-1A

INDUSTRY NAME:	Kinder Morgan Bulk Term. 5
PERMIT NUMBER:	400.132
REPORT DUE DATE:	November 15, 2008
SAMPLING PERIOD:	October 2008

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SAMPLE DATE	POINT OF	COMPLIANCE	SAMPL	E TYPE			
10/30/08		lA	GR	АВ			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	L DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) ¹	EPA 1664	11.8 m	g/L		N/A	_N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	8.25 m	g/L		110 mg/L	N/A	
pa	EPA 150.1	6.45 SI	U	() () () () () () () () () ()	5.0 - 11.5	NA	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF C	OMPLIANCE	S/	AMPLE TYPE			
10/30/08		1 A	C	COMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		3534 g	al/day		N/A	N/A	
TDS	SM 2540C	48900 m	ıg/L		NA	NA	
TDS _(calculated)	Calculated	1440 lt	s/day		3500 lbs/day	N/A	
Zinc (Total)	EPA 200.8	.912 m	ıg/L		3.7 mg/L	N/A	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

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Kinder Morgan Bulk Term. 5	For Industrial Source Control Division Use Only Org, ID# -25447
400.132	Date Postmarked/Received Date Entered
November 15, 2009	Entered By:
October 2009	Comments:
	400.132 November 15, 2009

SAMPLE DATE/TIME	POINT OF	COMPLIANCE	E SA	AMPLE TYPE			
10/27/09 @ 10:51		1A		GRAB			
PARAMETER	ANALYSIS METHOD	REPOR CONCENT	the state of the s	MDL	L DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) ^t	E1664	ND	mg/L		N/A	N/A	
HEM Oil and Grease (Non-Polar)	E1664	ND	mg/L		110 mg/L	N/A	
pH	М4500-Н	6.6	S U		5.0 - 11.5	NA	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE/TIME	POINT OF C	COMPLIANCE	SA	MPLE TYPE			
10/27/09 @ 10:51		1A	0	COMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORTI CONCENTRA		MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		7982 g	al/day		N/A	N/A	
TDS	E160.1	883 m	ıg/L		N/A	N/A	
TDS _(calculated)	Calculated	58.85 It	os/day	·	3500 lbs/day	N/A	
Zinc (Total)	E200.7	.0156 m	ıg/L		3.7 mg/L	N/A	,

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature:

Date:

INDUSTRY N	JAME:
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Kinder Morgan Bulk Term. 5

PERMIT NUMBER:

<u>400.132</u>

REPORT DUE DATE:

May 15, 2011

SAMPLING PERIOD:

April 2011

	ce Control Division Use Only . ID# -25447	
Date Postmarked/Received	Date Entered	
	Entered By:	
Comments:		

SAMPLE DATE	POINT OF (COMPLIANCE	S.	AMPLE TYPE			
04/19/11 @ 14:55		1A		GRAB	7		
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	L DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) ¹	EPA 1664	ND m	ıg/L		N/A	N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	ND m	ıg/L		110 mg/L	N/A	
рН	Field	7.15 S	U		5.0 - 11.5	N/A	

If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE	POINT OF C	COMPLIANCE	SA	MPLE TYPE				
04/19/11 @ 14:24	admids on a constraint of the	lA	(COMPOSITE			And Company of the Co	A CONTRACTOR
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA		MDL	 ***	MITS MONTHLY	COMMENTS	
Flow		5473 g	al/day		N/A	N/A		
TDS	SM2540C	45,200 m	ıg/L		N/A	N/A		
TDS _(calculated)	Calculated	2064.5 lb	s/day		3500 lbs/day	N/A		
Zinc (Total)	EPA 200.8	.716 m	g/L		3.7 mg/L	NA		

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that ualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly sponsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are gnificant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

ignature:

Date: 5 10 11

INDUSTRY NAME:	Kinder Morgan Bulk Term. 5		ce Control Division Use Only . ID# -25447	
RADODIRI IN MILE.	Tander Profesia Daik Term 5	Date Postmarked/Received	Date Entered	
PERMIT NUMBER:	<u>400.132</u>			•
REPORT DUE DATE:	February 15, 2011		Entered By:	
SAMPLING PERIOD:	January 2011	Comments:	-	

SAMPLE DATE	POINT OF C	COMPLIANCE	SAN	APLE TYPE			
01/12/11@ 14:18		1A		GRAB			
PARAMETER	ANALYSIS METHOD	REPORTE CONCENTRA	ı	MDL	DAILY	MITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) ¹	EPA 1664	ND m	ig/L		N/A	N/A	
HEM Oil and Grease (Non-Polar)	EPA 1664	ND m	ıg/L		110 mg/L	N/A	
pH	Field	7.54 S	U		5.0 - 11.5	N/A	

If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE		COMPLIANCE		MPLE TYPE		A Company of the Comp	45
01/11/11 @ 14:35		1A		OMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORT CONCENTR		MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		4851	gal/day		N/A	N/A	
TDS	SM 2540 C	26,500	mg/L		N/A	N/A	
TDS _(calculated)	Calculated	1072.82	lbs/day		3500 lbs/day		
Zinc (Total)	EPA 200.8	.614	mg/L		3.7 mg/L	N/A	

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INDUSTRY NAME:	Kinder Morgan Bulk Term. 5	For Industrial Source Control Division Use Only Org. ID# -25447 Date Postmarked/Received Date Entered
PERMIT NUMBER:	400.132	
REPORT DUE DATE:	November 15, 2010	Entered By:
SAMPLING PERIOD:	October 2010	Comments:

SAMPLE DATE/TIME	POINT OF 6	COMPLIANCE	s	AMPLE TYPE			
10/05/10 @ 13:55		1A		GRAB			
PARAMETER	ANALYSIS METHOD	REPORT CONCENTR	ar a tribar karaké é	MDL	I DAILY	IMITS MONTHLY	COMMENTS
HEM Oil & Grease (Total) 1	E1664	118	mg/L		[©] N/A	N/A	
HEM Oil and Grease (Non-Polar)	E1664	75.1	mg/L		110 mg/L	N/A	
pΗ	EPA 150.1	7.10	su		5.0 - 11.5	N/A	

1. If the value of HEM Oil and Grease Total is greater than 110 mg/L, then the Permittee shall analyze the sample for the HEM Oil and Grease Non-Polar constituent.

SAMPLE DATE/TIME	POINT OF (OMPLIANCE	SA	MPLE TYPE		•	
10/05/10 @ 13:45		1A	C	COMPOSITE			
PARAMETER	ANALYSIS METHOD	REPORTI CONCENTRA	eration to with the co	MDL	LI DAILY	MITS MONTHLY	COMMENTS
Flow		3023 g	al/day		N/A	N/A	
TDS	E160.1	77,700 n	ıg/L		N/A	NA	
TDS _(calculated)	Calculated	1960.24 II	os/day		3500 lbs/day	N/A	
Zinc (Total)	E200.8	.367 n	ıg/L		3.7 mg/L	N/A	100

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Date

Form 13-1A

109 2 22033804006272 21949643313530 NRC
Home

QUERY RESULTS

BACK TO ENTER QUERY

CREATE NEW QUERY

Click here to view query results in spreadsheet

	Materials Page	NRC Report #	Type of Call	Date/Time Received	Description Of Incident	Type Of Incident	Incident Cause	Incident Date/Time ₹	Location	State	Nearest City	County	Suspected Responsible Company	Medium Affected	Material Name
Vev	Platerials	970430	INCIDENT	18-MAR- 2011 14:37	THE CALLER IS REPORTING THAT SOMETHING WAS OVERLOADED ON A VESSEL IN ONE OF THEIR TANKS. AN UNKNOWN AMOUNT OF BUNKER FUEL WAS DISCHARGED ON DECK AND INTO THE WILLAMETTE RIVER.	VESSEL	UNKNOWN	18-MAR- 2011 11:20	15550 NORTH LOMBARD WILLAMETTE RIVER		PORTLAND	MULTNOMAH	KINDER MORGAN	WATER	BUNKER OIL
View	Materials	958313		28-OCT- 2010 13:30	///THIS IS A DRILL//// FAILURE OF DOCK LINE CAUSED 2100 GALLONS OF DIESEL TO GO INTO THE WATER.///THIS IS A DRILL///	FIXED	EQUIPMENT FAILURE	28-OCT- 2010 09:45	DOCKS 5880 NW ST HELENS RD	OR	PORTLAND	MULTNOMAH	KINDER MORGAN ENERGY PARTNERS	WATER	OIL: DIESEL
View)	(KAME) (A)	956439			THE CALLER REPORTED	FIXED	UNKNOWN	08-OCT- 2010 13:10	LINTON TERMINAL	OR	PORTLAND	MULTNOMAH	KINDER MORGAN	WATER	GEAR OIL

		17:02	THAT GEAR OIL				11400 NW ST	KORKEKEREKE			ENERGY	28 C C C C C C C C C C C C C C C C C C C	
			LEAKED FROM A FIRE PUMP ON THE DOCK, CREATING A SHEEN IN THE WATER.				HELENS RD						
View (*steri	937727 INCIDENT		CALLER IS REPORTING A RELEASE OF POTASSIUM CHLORIDE (OR POT ASH) FROM A CONVEYER SYSTEM ON THE DOCK DUE TO AN OVERLOAD ON THE CONVEYER BELT.	FIXED	EQUIPMENT FAILURE	21-APR- 2010 09:15	MARINE LOADING TERMINAL 15550 NORTH LOMBARD	OR	PORTLAND	MULTNOMAH	KINDER MORGAN	WATER	POTASSIUM CHLORIDE (OR POT ASH)
(CA) Materia	925912 INCIDENT		RELEASE OF MATERIAL FROM A	FIXED	EQUIPMENT FAILURE	11-DEC- 2009 10:15	15550 NORTH LOMBARD	OR	PORTLAND	MULTNOMAH	KINDER MORGAN	WATER	POTASSIUM CHLORIDE
TOAN CHARLES	922998 INCIDENT	09-NOV- 2009 14:02	CALLER STATED THERE WAS A VALVE THAT WAS LEFT OPEN UPSTREAM FROM THE FACILITY WHICH	STORAGE TANK	OPERATOR ERROR	16-OCT- 2009 00:40	BREAK OUT FACILITY	OR	PORTLAND	MULTNOMAH	KINDER MORGAN	OTHER	JET FUEL: JP-8
fiew Materi	914066 INCIDENT	06-AUG- 2009 18:37	CALLER IS REPORTING A DISCHARGE OF GASOLINE		OPERATOR ERROR	06-AUG- 2009 02:00			PORTLAND	MULTNOMAH	KINDER MORGAN	OTHER	GASOLINE: AUTOMOTIVE (UNLEADED)

				FROM THE TANK #124 WATER DRAIN VALVE DUE TO IT BEING PARTIALLY OPEN. CALLER STATES THE DISCHARGE WAS DISCOVERED BY AN OPERATOR ON DUTY AT 0200 PDT.				NORTHWEST ST. HELENS RD.							
(View)	877325	DRILL	15-JUL- 2008 12:05	**THIS IS A DRILL** DURING A WATER DRAW OPERATION ON STORAGE TANK 105, THE OPERATOR FAILED TO PROPERLY SECURE THE EQUIPMENT, WHICH RESULTED IN AN OVERFLOW OF THE OIL WATER SEPARATOR.	TANK	OPERATOR ERROR	15-JUL- 2008 09:00	5880 NW ST HELENS RD	OR	PORTLAND	MULTNOMAH	KINDER MORGAN	SOIL	GASOLINE: AVIATION (4.86G PB/GAL)	
View	Motoriols 861167	INCIDENT	31-JAN- 7 2008 17:48	CALLER IS REPORTING A RELEASE OF AER-O-LITE 3 % (FIRE FIGHTING FOAM) FROM A OIL WATER SEPARATOR DUE TO THE SEPARATOR BEING "OVER WHELMED" DUE TO THE RAIN. THE RELEASE WENT INTO THE WILLAMETTE RIVER.	FIXED	EQUIPMENT FAILURE	31-JAN- 2008 13:45	11400 NORTHWEST ST HELENS ROAD	OR	PORTLAND	MULTNOMAH	KINDER MORGAN	WATER	AER-O-LITE 3 % (FIRE FIGHTING FOAM)	

NATIONAL RESPONSE CENTER 1-800-424-8802

*** For Public Use ***

Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 970430

INCIDENT DESCRIPTION

*Report taken at 14:37 on 18-MAR-11

Incident Type: VESSEL

Incident Cause: UNKNOWN

Affected Area: WILLAMETTE RIVER

The incident occurred on 18-MAR-11 at 11:20 local time.

Affected Medium: WATER WILLAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

Organization: KINDER MORGAN

PORTLAND, OR

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

15550 NORTH LOMBARD County: MULTNOMAH

WILLAMETTE RIVER

City: PORTLAND State: OR

RELEASED MATERIAL(S)

CHRIS Code: OTH Official Material Name: OTHER OIL

Also Known As: BUNKER OIL

Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

THE CALLER IS REPORTING THAT SOMETHING WAS OVERLOADED ON A VESSEL IN ONE OF THEIR TANKS. AN UNKNOWN AMOUNT OF BUNKER FUEL WAS DISCHARGED ON DECK AND INTO THE WILLAMETTE RIVER.

INCIDENT DETAILS

Platform Rig Name: Platform Letter: Location Area ID: Location Block ID: OCSG Number:

OCSP Number:

State Lease Number: Pier Dock Number: Berth Slip Number:

---SHEEN INFORMATION--Sheen Color: DARK BLACK
Sheen Odor Description:
Sheen Travel Direction:
Sheen Size Length: 150 FEET
Sheen Size Width: 6 FEET
---WATER INFORMATION---

Body of Water: WILLAMETTE RIVER

Tributary of:

Nearest River Mile Marker:

Water Supply Contaminated: UNKNOWN

---VESSEL INFORMATION---

Name: TRANSCENDEN TIME Number: Aground: NO

Flag:

Length: Breadth: Draught:

Type: OTHER

Hull Construction:
Fuel Capacity:
Fuel on Board:
Cargo Capacity:
Cargo on Board:

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES: NO Hospitalized: Empl/Crew: Passenger:

FATALITIES: NO Empl/Crew: Passenger: Occupant:

EVACUATIONS: NO Who Evacuated: Radius/Area:

Damages: NO

Length of Direction of

Closure Type Description of Closure Closure Closure

Air: N

Road: N Major Artery: N

Waterway: N

Track: N

Passengers Transferred: NO Environmental Impact: UNKNOWN

Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

BOOMS APPLIED, ABSORBENTS APPLIED

Release Secured: UNKNOWN

Release Rate:

Estimated Release Duration:

WEATHER

Weather: OVERCAST, 50°F

ADDITIONAL AGENCIES NOTIFIED

Federal: USCG

State/Local: NONE

State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

DHS NOC (NOC)

18-MAR-11 14:45

USCG ICC (ICC ONI)

18-MAR-11 14:45

CG INVESTIGATIVE SERVICE HQ (WFO)

18-MAR-11 14:45

DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE) 18-MAR-11 14:45

U.S. EPA X SEATTLE (MAIN OFFICE)

18-MAR-11 14:48

FEMA REGION 10 (MAIN OFFICE)

18-MAR-11 14:45

NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

18-MAR-11 14:45

NOAA RPTS FOR OR (MAIN OFFICE)

18-MAR-11 14:45

OREGON DEQ (EMERGENCY RESPONSE PROGRAM)

18-MAR-11 14:45

OREGON TITAN FUSION CENTER (COMMAND CENTER)

18-MAR-11 14:45

OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)

18-MAR-11 14:45

SECTOR COLUMBIA RIVER (COMMAND CENTER)

18-MAR-11 14:48

SECTOR COLUMBIA RIVER (DETACHED IMD)

18-MAR-11 14:45

OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)

18-MAR-11 14:45

WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)

18-MAR-11 14:45

ADDITIONAL INFORMATION

NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 970430 ***

NATIONAL RESPONSE CENTER 1-800-424-8802

*** For Public Use ***

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Incident Report # 970430

INCIDENT DESCRIPTION

*Report taken at 14:37 on 18-MAR-11

Incident Type: VESSEL

Incident Cause: UNKNOWN

Affected Area: WILLAMETTE RIVER

The incident occurred on 18-MAR-11 at 11:20 local time.

Affected Medium: WATER WILLAMETTE RIVER

SUSPECTED RESPONSIBLE PARTY

Organization: KINDER MORGAN

PORTLAND, OR

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

15550 NORTH LOMBARD County: MULTNOMAH

WILLAMETTE RIVER

City: PORTLAND State: OR

RELEASED MATERIAL(S)

CHRIS Code: OTH Official Material Name: OTHER OIL

Also Known As: BUNKER OIL

Qty Released: 0 UNKNOWN AMOUNT Qty in Water: 0 UNKNOWN AMOUNT

DESCRIPTION OF INCIDENT

THE CALLER IS REPORTING THAT SOMETHING WAS OVERLOADED ON A VESSEL IN ONE OF THEIR TANKS. AN UNKNOWN AMOUNT OF BUNKER FUEL WAS DISCHARGED ON DECK AND INTO THE WILLAMETTE RIVER.

INCIDENT DETAILS

Platform Rig Name: Platform Letter: Location Area ID: Location Block ID: OCSG Number: OCSP Number:

State Lease Number: Pier Dock Number: Berth Slip Number:

---SHEEN INFORMATION--Sheen Color: DARK BLACK
Sheen Odor Description:
Sheen Travel Direction:
Sheen Size Length: 150 FEET
Sheen Size Width: 6 FEET
---WATER INFORMATION---

Body of Water: WILLAMETTE RIVER

Tributary of:

Nearest River Mile Marker:

Water Supply Contaminated: UNKNOWN

---VESSEL INFORMATION---

Name: TRANSCENDEN TIME Number: Aground: NO

Flag:

Length: Breadth: Draught:

Type: OTHER

Hull Construction:
Fuel Capacity:
Fuel on Board:
Cargo Capacity:
Cargo on Board:

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES: NO Hospitalized: Empl/Crew: Passenger:

FATALITIES: NO Empl/Crew: Passenger: Occupant:

EVACUATIONS: NO Who Evacuated: Radius/Area:

Damages: NO

Length of Direction of

Closure Type Description of Closure Closure Closure

Air: N

Road: N Major Artery: N

Waterway: N

Track: N

Passengers Transferred: NO Environmental Impact: UNKNOWN

Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

BOOMS APPLIED, ABSORBENTS APPLIED

Release Secured: UNKNOWN

Release Rate:

Estimated Release Duration:

WEATHER

Weather: OVERCAST, 50°F

ADDITIONAL AGENCIES NOTIFIED

Federal: USCG

State/Local: NONE

State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

DHS NOC (NOC)

18-MAR-11 14:45

USCG ICC (ICC ONI)

18-MAR-11 14:45

CG INVESTIGATIVE SERVICE HQ (WFO)

18-MAR-11 14:45

DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE) 18-MAR-11 14:45

U.S. EPA X SEATTLE (MAIN OFFICE)

18-MAR-11 14:48

FEMA REGION 10 (MAIN OFFICE)

18-MAR-11 14:45

NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

18-MAR-11 14:45

NOAA RPTS FOR OR (MAIN OFFICE)

18-MAR-11 14:45

OREGON DEQ (EMERGENCY RESPONSE PROGRAM)

18-MAR-11 14:45

OREGON TITAN FUSION CENTER (COMMAND CENTER)

18-MAR-11 14:45

OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)

18-MAR-11 14:45

SECTOR COLUMBIA RIVER (COMMAND CENTER)

18-MAR-11 14:48

SECTOR COLUMBIA RIVER (DETACHED IMD)

18-MAR-11 14:45

OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)

18-MAR-11 14:45

WA STATE EMERGENCY MANAGEMENT (MAIN OFFICE)

18-MAR-11 14:45

ADDITIONAL INFORMATION

NO ADDITIONAL INFORMATION.

*** END INCIDENT REPORT # 970430 ***

NATIONAL RESPONSE CENTER 1-800-424-8802

*** For Public Use ***

Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 925912

INCIDENT DESCRIPTION

*Report taken at 14:04 on 11-DEC-09

Incident Type: FIXED

Incident Cause: EQUIPMENT FAILURE Affected Area: WILLAMETTE RIVER

The incident occurred on 11-DEC-09 at 10:15 local time.

Affected Medium: WATER

SUSPECTED RESPONSIBLE PARTY

Organization: KINDER MORGAN

PORTLAND, OR

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

15550 NORTH LOMBARD County: MULTNOMAH

City: PORTLAND State: OR

RELEASED MATERIAL(S)

CHRIS Code: NCC Official Material Name: NO CHRIS CODE

Also Known As: POTASSIUM CHLORIDE

Qty Released: 4 TON(S)

Qty in Water: 4 TON(S)

DESCRIPTION OF INCIDENT

RELEASE OF MATERIAL FROM A CONVEYING SYSTEM DUE TO EQUIPMENT FAILURE.

INCIDENT DETAILS

Package: N/A Building ID:

Type of Fixed Object: TRANSFER FACILITY

Power Generating Facility: NO

Generating Capacity:

Type of Fuel:

NPDES:

NPDES Compliance: UNKNOWN

---WATER INFORMATION---

Body of Water: WILLAMETTE RIVER

Tributary of:

Nearest River Mile Marker: Water Supply Contaminated: NO

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

, and a second control of the contro

INJURIES: NO Hospitalized: Empl/Crew: Passenger:

FATALITIES: NO Empl/Crew: Passenger: Occupant:

EVACUATIONS: NO Who Evacuated: Radius/Area:

Damages: NO

Length of Direction of Description of Closure Closure Type Closure Closure Air: N Road: N Major Artery: N Waterway: N Track: N Passengers Transferred: NO Environmental Impact: NO Media Interest: NONE Community Impact due to Material: REMEDIAL ACTIONS CONTRACTOR HAS BEEN HIRED Release Secured: YES Release Rate: Estimated Release Duration: WEATHER

Weather: SUNNY, °F

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE

State/Local: NONE

State/Local On Scene: NONE

State Agency Number:

NOTIFICATIONS BY NRC

DHS NOC (NOC)

11-DEC-09 14:11

DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)

11-DEC-09 14:11

EPA CRIMINAL INVESTIGATION DIVISION (EPA CRIMINAL INVESTIGATION DIV REGION 10)

11-DEC-09 14:11

FEMA REGION 10 (MAIN OFFICE)

11-DEC-09 14:11

NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)

11-DEC-09 14:11

NOAA RPTS FOR OR (MAIN OFFICE)

11-DEC-09 14:11

OREGON PUBLIC HEALTH (ENVIRON & OCCUPATIONAL EPIDEMIOLOGY)

11-DEC-09 14:11

SECTOR PORTLAND (COMMAND CENTER)

11-DEC-09 14:14

OREGON EMERGENCY MANAGEMENT (MAIN OFFICE)

11-DEC-09 14:11

STATE EMERGENCY MANAGEMENT (MA	IN OFFICE)
11-DEC-09 14:11	
	ADDITIONAL INFORMATION
O IDDITIONIL INCOMMITTOR.	



Acetylene

Sightion 1. Chemical product and company identification

Product name

Acetylene

Supplier

AIRGAS INC., on behalf of its subsidiaries

259 North Radnor-Chester Road

Suite 100

Radnor, PA 19087-5283

1-610-687-5253

Product use

Synthetic/Analytical chemistry.

Synonym

Ethyne; Ethine; Narcylen; C2H2; Acetylen; UN 1001; Vinylene

MSDS#

001001

Date of

4/8/2008.

Preparation/Revision in case of emergency

: 1-866-734-3438

Section 2. Hazards identification

Physical state

: Gas.

Emergency overview

: WARNING!

FLAMMABLE GAS.

MAY CAUSE FLASH FIRE.

MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

CONTENTS UNDER PRESSURE.

Keep away from heat, sparks and flame. Do not puncture or incinerate container. May cause target organ damage, based on animal data. Use only with adequate ventilation.

Keep container closed.

Contact with rapidly expanding gases can cause frostbite.

Target organs

May cause damage to the following organs: upper respiratory tract, central nervous

system (CNS).

Routes of entry

: Inhalation

Potential acute health effects

Eves Skin

Contact with rapidly expanding gas may cause burns or frostbite. : Contact with rapidly expanding gas may cause burns or frostbite.

Inhalation

: Acts as a simple asphyxiant.

Ingestion

Ingestion is not a normal route of exposure for gases

Potential chronic health

effects

: CARCINOGENIC EFFECTS: Not available. **MUTAGENIC EFFECTS**: Not available.

TERATOGENIC EFFECTS: Not available.

Medical conditions

aggravated by over-

: Pre-existing disorders involving any target organs mentioned in this MSDS as being at

See toxicological information (section 11)

exposure

risk may be aggravated by over-exposure to this product.

Section 3. Composition, Information on Ingredients

Name Acetylene CAS number

% Volume

Exposure limits

74-86-2

100

NIOSH REL (United States, 12/2001).

CEIL: 2662 mg/m3



Section 4. First aid measures

Ne action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, scuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact

: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact

: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Frosthite

: Try to warm up the frozen tissues and seek medical attention.

Inhalation

: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion

: As this product is a gas, refer to the inhalation section.

Section 5. Fire fighting measures

Flammability of the product

: Flammable.

Auto-ignition temperature

: 304.85°C (580.7°F)

Flash point

: Closed cup: -18.15°C (-0.7°F).

Flammable limits

: Lower: 2.5% Upper: 82%

Products of combustion

: Decomposition products may include the following materials: carbon dioxide

carbon monoxide

Fire hazards in the presence: of various substances

Extremely flammable in the presence of the following materials or conditions: open

flames, sparks and static discharge, heat and oxidizing materials.

Fire-fighting media and

: In case of fire, use water spray (fog), foam or dry chemical.

instructions

In case of fire, allow gas to burn if flow cannot be shut off immediately. Apply water from a safe distance to cool container and protect surrounding area. If involved in fire, shut off flow immediately if it can be done without risk.

Contains gas under pressure. Flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions

: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Shut off gas supply if this can be done safely. Isolate area until gas has dispersed.

Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up

Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see section 1 for emergency contact information and section 13 for waste disposal.



Section 7. Handling and storage

Handling

: Use only with adequate ventilation. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. High pressure gas. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Keep container closed. Keep away from heat, sparks and flame. To avoid fire, eliminate ignition sources. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Storage

: Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Segregate from oxidizing materials. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Personal protection

Eyes

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

opiratory

: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Hands

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Personal protection in case

of a large spill

: Self-contained breathing apparatus (SCBA) should be used to avoid inhalation of the product.

Product name

acetylene

NIOSH REL (United States, 12/2001).

CEIL: 2662 mg/m3

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 26.04 g/mole

Molecular formula : C2-H2

: Sublimation temperature: -81.8°C (-115.2°F) Melting/freezing point

Critical temperature : 35.3°C (95.5°F) Vapor pressure : 635 (psig) Vapor density : 0.9 (Air = 1): 14.7058 Specific Volume (ft 3/lb)

G: ensity (lb/ft 3) : 0.068

Acetylene

Section 10. Stability and reactivity

Stability and reactivity

: The product may undergo hazardous decomposition, condensation or polymerization, react violently with water to emit toxic gases or become self-reactive under conditions of shock or increase in temperature or pressure.

incompatibility with various substances

: Extremely reactive or incompatible with oxidizing agents

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization

: Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Toxicity data

Chronic effects on humans : May cause damage to the following organs: upper respiratory tract, central nervous

system (CNS).

Other toxic effects on humans

: No specific information is available in our database regarding the other toxic effects of this material to humans.

Specific effects

Carcinogenic effects **Mutagenic effects**

: No known significant effects or critical hazards. : No known significant effects or critical hazards.

Reproduction toxicity

: No known significant effects or critical hazards.

Section 12. Ecological information

Aquatic ecotoxicity

Not available.

Precists of degradation

: Products of degradation: carbon oxides (CO, CO₂) and water.

Environmental fate

Not available.

Environmental hazards

No known significant effects or critical hazards.

Toxicity to the environment

: Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

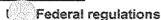
Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1001	ACETYLENE, DISSOLVED	2.1	Not applicable (gas).		Limited quantity Yes.
						Packaging instruction Passenger aircraft Quantity limitation: Forbidden.
						Cargo aircraft Quantity limitation: 15 kg

Acetylene						
TDG Classification	UN1001	ACETYLENE, DISSOLVED	2.1	Not applicable (gas).	3	Explosive Limit and Limited Quantity Index 0
						Passenger Carrying Ship Index 75
						Passenger Carrying Road or Rail Index Forbidden
						Special provisions 38, 42
Mexico Classification	UN1001	ACETYLENE, DISSOLVED	2.1	Not applicable (gas).		

Section 15. Regulatory information

United States



: United States inventory (TSCA 8b): This material is listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: acetylene

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: acetylene: Fire hazard, reactive, Sudden release of pressure, Immediate (acute) health

hazard

Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: acetylene Clean Air Act (CAA) 112 regulated flammable substances: acetylene

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations

: Connecticut Carcinogen Reporting: This material is not listed.
Connecticut Hazardous Material Survey: This material is not listed.

Florida substances: This material is not listed.

Illinois Chemical Safety Act: This material is not listed.

Illinois Toxic Substances Disclosure to Employee Act: This material is not listed.

Louisiana Reporting: This material is not listed.

Louisiana Spill: This material is not listed.

Massachusetts Spill: This material is not listed.

Massachusetts Substances: This material is listed.

Michigan Critical Material: This material is not listed.

Minnesota Hazardous Substances: This material is not listed. New Jersey Hazardous Substances: This material is listed.

New Jersey Spill: This material is not listed.

New Jersey Toxic Catastrophe Prevention Act: This material is not listed.

New York Acutely Hazardous Substances: This material is not listed.

New York Toxic Chemical Release Reporting: This material is not listed.

Pennsylvania RTK Hazardous Substances: This material is listed.

Rhode Island Hazardous Substances: This material is not listed.

Acetylene

Canada

WHMIS (Canada)



: Class A: Compressed gas.

Class B-1: Flammable gas.

Class F: Dangerously reactive material.

CEPA Toxic substances: This material is not listed.

Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.

Alberta Designated Substances: This material is not listed.

Ontario Designated Substances: This material is not listed.

Quebec Designated Substances: This material is not listed.

Section 16. Other information

United States

Label requirements

: FLAMMABLE GAS.

MAY CAUSE FLASH FIRE.

MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

CONTENTS UNDER PRESSURE.

Canada

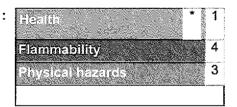
Label requirements

: Class A: Compressed gas. Class B-1: Flammable gas.

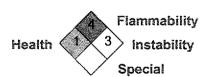
Class F: Dangerously reactive material.

Hazardous Material Information System (U.S.A.)





National Fire Protection Association (U.S.A.)



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.





The following data on potash products provides a guideline only. Potash is not a controlled product as defined in the Controlled Product Regulations pursuant to the Hazardous Products Act (Canada). Any specific health concerns should be directed to a qualified industrial hygienist.

Section I: Chemical Product and Company Information

Chemical name:

Potassium Chloride

Trade name and synonyms:

Potash, Muriate of Potash, Sylvite

Chemical family:

Inorganic Salt

Chemical formula:

KCl

Molecular weight:

74.6

Material use:

Fertilizer and/or Industrial Applications

Supplier name:

Canpotex Limited

Address:

#400, 111 - 2nd Avenue South

Saskatoon, Saskatchewan

Canada S7K 3R7

Emergency contact:

(306) 931-2200

08:30-16:30 CST

Manufacturer:

For manufacturer's contact details and production information please

contact Canpotex directly.

Section II: Hazards Identification

Hazards classification:

This product and its components are not considered hazardous according to Workplace Hazardous Materials Information System ("WHMIS") in Canada, Hazardous Substance Regulation ("HSC") in United States or Classification Labeling and Packaging ("CLP") regulation No. 1272/2008 in Europe.

Special hazards pertaining to man and environment:

Not regarded as a health or environmental hazard under current legislation.

Other adverse hazards:

Not applicable

NFPA Code/Classification:

Flammability

Health Reactivity

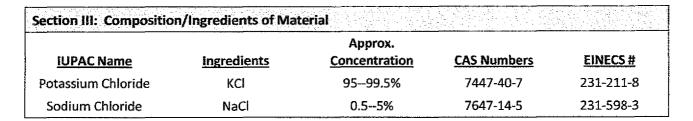
Specific Hazard

HMIS Hazards Class:

Health: 1 (slight), Flammability: 0 (least), Physical Hazard: 0 (least)







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			5.5	100	• • • • • •	-		2.0	. ::						5.4	100	•		- 199 a -	- 1			

Move away from exposure and flush eyes with clean water for at least 15 Eyes:

minutes, keeping eyelids open.

Skin: Cleanse the affected areas with mild soap and water.

Inhalation: Move victim away from exposure and into fresh air. Loosen clothing around

neck and waist. If victim is not breathing, clear airway and immediately begin

artificial respiration or administer oxygen.

Ingestion: Administer water if the patient is conscious. Ingestion will usually cause purging

> of the stomach by vomiting. If patient is unconscious, lower the head so that vomiting does not aspirate into the lungs. If large amounts are swallowed seek

Emergency Medical attention.

No delayed effects expected. Delayed effects:

Information to physician: No special means of treatment.

At any time if discomfort persists, seek medical attention.

Section V: Fire Fighting Measures

As required for surrounding fire. Potash is non-flammable and does not support Extinguishing media:

combustion.

Special exposure hazards arising from the product,

combustion products or

resulting gases:

Firefighting Instructions and equipment:

No unusual explosive hazards are expected. When subjected to extremely high

temperatures, it may release small quantities of chlorine gas.

Wear full protective clothing and use self contained breathing apparatus.

Section VI: Accidental Release Measures

Personal Precautions: Wear appropriate equipment including respiratory protection as conditions

warrant (see PPE under section VIII for more details).

Environmental

Potash is a crop nutrient and plant food however; large spills can be harmful or **Precautions:**

kill vegetation. Prevent material from entering sewers, storm drains, other

unauthorized treatment drainage systems, and natural waterways.

Section VI: Accidental Release Measures continues on page 3





Section VI: Accidental Release Measures - continued from page 2

Methods for cleaning up:

Small Spill:

Sweep up and use appropriate tools to put spilled material in suitable container

for intended us or disposal.

Large Spill:

Stay upwind. Prevent additional spillage of material. Collect spill with appropriate equipment, if on soil collect top 5cm of soil. Ensure disposal

complies with governmental requirements and local regulations. Prevent spilled

materials from entering sewers, waterways, etc.

Section VII: Handling and Storage

Handling: The use of appropriate respiratory protection is advised when concentrations

exceed any established exposure limits. Avoid generating dust by excessive or

unnecessary handling. Wash hands after handling.

Storage: Keep containers tightly closed and store in cool, dry well ventilated areas. Avoid

contact with aluminum or carbon steel to minimize corrosion.

Ventilation: If operations generate excessive dust, local exhaust of other ventilation may be

required to reduce dust concentrations below exposure limits.

Section VIII: Exposure Controls/ Personal Protection

Engineering controls: Ventilation or exhaust systems may be required to keep airborne dust

concentrations below exposure limits.

Monitoring procedures: Methods for the Determination of Hazardous Substances ("MDHS") 14/3

general method for sampling gravimetric analysis of respirable and inhalable

dust

Oregon Department of Environmental Quality ("ODEQ") Air Contaminant

Permit 26-3071 with the following limits:

Visible Emissions – Not to meet or exceed 20% opacity for a period

aggregating more than 30 seconds in any one hour.

Particulate Matter Emissions – Not to exceed 0.1 grains per standard

cubic foot.

Exposure limits: Saskatchewan TWA: 10 mg/m³ inhalable, 3 mg/m³ respirable, for particulate

not otherwise classified.

Occupational Health and Safety ("OSHA") TWA: 10 mg/m³ inhalable, 3 mg/m³

respirable particulates not otherwise classified

American Conference of Industrial Hygienists ("ACGIH") TWA: 10 mg/m3

Prevent material from entering sewers, storm drains, other unauthorized

inhalable, 3 mg/m³ respirable particulates not otherwise classified

Environmental exposure

controls (water, air, soil): treatment drainage systems, and natural waterways.

Section VIII: Exposure Controls/Personal Protection continues on page 4

40



Section VIII: Exposure Controls/ Personal Protection – continued from page 3

Personal Protective Equipment ("PPE"):

Eye Protection: The use of approved eye protection with side shields to safeguard against

potential eye contact, irritation or injury is recommended.

Skin Protection:

The use cloth or leather gloves, long sleeve shirts and long pants are advised

to safeguard against skin contact, irritation and absorption.

Respiratory:

Wear NIOSH approved respiratory equipment when workplace conditions

warrant the use of a respirator.

Other PPE:

Clean water should be available in the workplace for flushing eyes and skin.

Impervious clothing should be worn as needed.

Section IX: Physical and Chemical Properties

Appearance:

Material is a solid, white to red/brown in color, fine to 1" sized chicklets

Odour:

None to slight

pH:

7-10 (10% solution in water)

Boiling point:

Sublimes at 1410-1500°C (2571.8-2,732°F)

Melting/Freezing point:

771-776°C (1423-1428°F)

Flash point:

Not applicable

Flammable properties:

Non-flammable

Explosive properties:

Non-explosive

Autoignition temperature:

Not applicable

Lower/Upper exposure

limits:

Not applicable

OSHA flammability class:

Not applicable

Oxidizing properties:

No data available

Corrosivity:

Similar to salt, mildly corrosive to metals in the presence of moisture. Solution potash is corrosive to 304 or 316 stainless steels and may induced stress

cracking in these materials. Consult a metallurgist specialist regarding

compatibility of materials in handling systems

Bulk density:

1000-1300 kg/m³ or 64-75lbs/ft³. Refer to Canpotex Product Specification

Sheet for the specific bulk density of potash products.

Density:

Not applicable

Solubility:

34.2 g/100mL in water at 20°C (99.5-99.999%)

Partition coefficient

No data available

(n-octanol/water):

Section IX: Physical and Chemical Properties continues on page 5

40



Section IX: Physical and Chemical Properties - continued from page 4

Viscosity:

Not applicable

Vapour density (air=1):

2.57

Vapour pressure (mm Hg):

Approximately Zero

Specific gravity (water=1):

1.984-2.0

Evaporation rate:

Negligible

Odor:

None to slight

Taste:

Saline (strong)

Section X: Stability and Reactivity

Chemical stability:

This product is stable.

Conditions to avoid:

Not applicable

Materials to avoid:

Potassium chloride:

Contact with strong acids may produce chlorine gas; contact with hot nitric acid may produce toxic nitrosyl chloride. Incompatible with boron trifluoride or trichloride, potassium dichromate, potassium permanganate and sulfuric

acid.

Sodium chloride:

Can react with most noble metals, such as iron or steel, building material (e.g. cement), bromine, or trifluoride. Explosive reaction may occur if NaCl is mixed with dichloramaleic anhydride and urea. Electrolysis of mixtures containing NaCl and nitrogen compounds may form explosive nitrogen

trichloride

Dust combustion and

Median value: <63µm; explosibility: St 1; minimum ignition energy (mJ):

explosion characteristics:

N/A

Hazardous decomposition:

None known.

Hazardous polymerization:

Will not occur.

Section XI: Toxicological Information

Routes of exposure:

Skin, eyes, ingestion, inhalation.

Toxicity to animals:

Potassium Chloride:

Oral Toxicity (LD_{s0}): rat 2,600 mg/kg; mouse 1,500 mg/kg

• Eye irritant: rabbit 500mg/24hours - mild

Inhalant toxicity: No data available

Dermal toxicity: No data available

Repeat dose toxicity: No data available

• Acute toxicity (other routes): No data available

Section XI: Toxicological Information continues on page 6

40



Section XI: Toxicological Information – continued from page 5

Toxicity to animals:

Sodium Chloride:

Oral Toxicity(LD_{so}): rat 3,000mg/kg; mouse 4,000mg/kg

Eye Irritant: rabbit 100 mg/24hours – moderate;

500mg/24 hours - mild

Inhalant toxicity: No data available

Dermal toxicity: No data available

Repeat dose toxicity: No data available

Acute toxicity (other routes): No data available

Special remarks on toxicity to animals:

Potassium Chloride/ Sodium Chloride (based on data from another salt compound (i.e. potassium nitrate):

 Bacterial genetic toxicity in-vitro (gene mutation): saccaramyces cerevisiae – mitotic recombination: NOAEL = 300mM

 Non-bacterial genetic toxicity in-vitro (chromosomal aberration): No data available

Toxicity to humans (acute): May cause irritation due to mechanical and drying action. Large doses by

mouth can cause gastrointestinal irritation, purging, weakness and circulatory disturbances. Potassium chloride is used as a dietary supplement in food for

human consumption and is generally regarded as safe.

Toxicity to humans

(chronic):

No known effects from chronic exposure, not carcinogenic, mutagenic or teratogenic. Individuals with existing kidney problems should minimize their

exposure to this substance.

Eyes and skin: Mild irritation including redness and burning sensation due to mechanical and

drying action.

Inhalation: Inhalation may produce irritation to respiratory tract or mucous membranes

characterized by an urge to cough.

In large amounts may cause irritation to the gastro-intestinal tract, vomiting,

diarrhea, nausea, tingling in extremities, weak pulse and circulatory

disturbances. Potassium Chloride is rapidly excreted from the body making

acute effects rare.

Effects on humans: Large doses by mouth can cause gastrointestinal irritation, purging, weakness

and circulatory disturbances. Potassium chloride is used as a dietary

supplement in food for human consumption and is generally regarded as safe.

Sensitisation: No data available

Toxicokinetics: No data available

Metabolism: No data available

Distribution: No data available

This product and its components are not considered hazardous according to WHMIS (Canada) HSC (United States) or CLP regulation No. 1272/2008 (Europe).

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Section XII: Ecological Information

Ecotoxicity:

Low toxicity to fish and other water organisms. Spills of large quantities of this product may affect fresh water species. Dissolution of a large quantities of Potassium Chloride and Sodium Chloride in water may create and elevated level of salinity that can be harmful to aquatic species that are not salt tolerant.

Toxicity to:

- Fish (acute): Lepomis macrochirus 96 hours LC50 2010 mg/L
- Fish (chronic): No data available
- Aquatic Invertebrates (acute): Physa heterostrapha-96hrs LC50-940 mg/L
- Aquatic Invertebrates (chronic): No data available
- Aquatic Plants: Scenedesmus subspicatus 72hrs C50 2500 mg/L
- Bacteria (activated sludge): No data available
- Soil dwelling organism: No data available
- Terrestrial Plants: No data available

Toxicity:

Not toxic to aquatic organisms as defined by the US Environmental Protection agency and EU CLP regulation No. 1272/2008.

Stability in water:

lons can persist, dissociates in water

Stability in soil:

Binds to clay particles

Transportation/ distribution:

1.51 x 10⁻⁸% to air; 45.2% to water; 54.7% to soil; 0.0755% to sediment

Mobility:

Will quickly dissolve and disperse in water. Notify downstream water users.

% Volatiles:

<0.5%

BOD and COD:

Not applicable

Products and toxicity of

degradation:

Material dissolves to give potassium and chloride ions. The product itself and its products of degradation are not toxic. Product may degrade water quality

and taste. Notify downstream water users.

Section XIII: Disposal Considerations

Product Disposal:

Recover and place material in a suitable container for intended use or disposal. Because of its solubility, Potash should not be disposed of in a

location where run-off will escape.

Ensure disposal complies with government and local regulations.

Section XIV: Transportation Information

TDG/D.O.T. classification:

Not controlled under Transportation of Dangerous Goods Regulations

("TDG") in Canada or Department of Transportation ("D.O.T") in USA.

IMDG, ADR, RID, ICAO, IATA:

This material is not a dangerous good for the purpose of transportation

PIN and shipping name:

Not applicable

Special provisions:

Not applicable





Section XV: Regulatory Information

Controlled Products Regulation (CRP): This product is not classified as dangerous according to WHMIS regulations. This product has been classified according to hazards criteria of the CRP and

the MSDS contains all of the information required by the CPR.

DSL Canada:

This product does not contained ingredient(s) on the Ingredient Disclosure list.

All ingredients are listed on Domestic Substance List ("DSL").

United States - SARA Hazard Category:

This product has been reviewed according to the Environmental Protection Agency ("EPA") Hazard Categories promulgated under Section 311and 312 of the Superfund Amendment and reauthorization Act of 1986 (SARA title III) and

is considered, under applicable definitions, to meet the following:

Fire: No; Pressure Generating: No; Reactivity: No; Acute: No; Chronic: No

40 CRF Part 355 – Extreme Hazardous Substances: None 40 CFR Part 370 – Hazardous Chemical Report: None

All intentional ingredients listed on Toxic Substances Control Act ("TSCA")

inventory.

SARA Title III

SARA 311/312/313: No

FDA

Potassium Chloride used as a dietary supplement in food for human consumption is generally recognized as safe ("GRAS") when used in accordance with good manufacturing practice [21 CFR182.5622].

Substance added directly to human food affirmed as GRAS [21 CFR 184.1622].

CERCA/ RCRA 261.33

Not listed

NTP, IARC, OSHA:

This material has not been identified as a carcinogen by the USA National

Toxicological Program ("NTP"), International Agency for Research on Cancer

("IARC") or OSHA.

HAZCOM

Exempt under 1910.1200 (B)(6)(x)

Section XVI: Other Information

Sections changed since last revision: Not Applicable

Judgments as to the suitability of information herein for purchaser's purposes are necessarily the purchaser's responsibility. Therefore, although reasonable care has been taken in the preparation of such information, Canpotex extends no warranties, makes no representations and assumes no responsibility for the accuracy or suitability of such information for application to the purchaser's intending purposes or for the consequences of its use

Additional Information contact: S.G Sabulsky, Manager Product Quality and Surveillance

Phone: (306) 931-7292 Email: Sandra.Sabulsky@Canpotex.com



2/4/09

MATERIAL SAFETY DATA SHEET FOR CANTESCO® FORMULA 300

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

CANTESCO® 300 REG TEMP TYPE I / REG TEMP LPGAS

PRODUCT IDENTIFIER

LEAK DETECTION COMPOUND

PRODUCT USE

LEAK DETECTION COMPOUND

ITEM CODE(S)

300-04, 300-08, 300-1G, 300-5G, 300-DR, LPI-08

300-115, 300-230, 300-4L, 300-20L, LPI-230 10225, 10001, 10230, 10235, 10240, 10190

UPC BAR CODE(S) FORMULA NAME

300

FORMULA CODE

57008

MSDS CODE

20

E-MAIL ADDRESS WEB ADDRESS

MSDS@CANTESCO.COM WWW.CANTESCO.COM

USA ADDRESS

CANTESCO CORPORATION USA PMB 023 - 60 INDUSTRIAL PARKWAY

CHEEKTOWAGA, NY 14227

PH (716) 693-8206 FAX (716) 693-8373

CANADIAN ADDRESS

CANTESCO CORPORATION

13 - 5200 DIXIE ROAD MISSISSAUGA, ON L4W 1E4

PH (905) 624-5463 FAX (905) 624-2840

PREPARED BY

QUALITY MANAGER

TELEPHONE

(905) 624-5463

EMERGENCY TELEPHONE

(613) 996-6666 (CANUTEC - Call collect)

PREPARATION DATE

MARCH 01, 2006

OSHA REGULATORY STATUS

NOT REGULATED NOT REGULATED

WHMIS CLASSIFICATION

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS	OSHA PEL	ACGIH TLV	LD50 SPECIES/ROUTE	LC50 SPECIES/ROUTE	%WT
NONE						

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

EYE: In accordance with FHSA/CPSC Guidelines product is not an eye irritant.

SKIN: In accordance with FHSA/CPSC Guidelines product is not a primary dermal irritant.

INGESTION: Effect of ingestion unknown, but major toxicity is not expected to occur.

INHALATION: No health effects anticipated from vapour.

EFFECTS OF ACUTE EXPOSURE: N/Av

EFFECTS OF CHRONIC EXPOSURE: No serious long-term health effects are anticipated.

OTHER IMPORTANT HAZARDS: None

SUGGESTED HMIS RATING: HEALTH | 1 | FLAMMABILITY | 0 | REACTIVITY | 0 | SPECIAL - NONE

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SECTION 4. FIRST AID MEASURES

INHALATION: If someone has difficulty breathing after exposure to product, remove him or her to fresh air immediately. If breathing difficulty persists, contact a doctor.

INGESTION: If swallowed, do not induce vomiting. Get medical attention right away.

EYE CONTACT: For eye contact, flush with water for at least 15 minutes.

SKIN CONTACT: For skin contact, wash with soap and water.

SECTION 5. FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: Not flammable under normal conditions. Product is water based.

MEANS OF EXTINCTION: N/Av

SPECIAL FIRE FIGHTING PROCEDURES: None UNUSUAL FIRE AND EXPLOSION HAZARDS: N/Av

FLASH POINT / DETERMINATION: None

UPPER FLAMMABLE LIMIT: None LOWER FLAMMABLE LIMIT: None

AUTO-IGNITION TEMPERATURE: Not known.

HAZARDOUS COMBUSTION PRODUCTS: If water component is driven off, and residue ignited, this product may release carbon dioxide, carbon monoxide, and oxides of nitrogen and sulphur.

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: Not sensitive.

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: Will not be ignited by exposure to static.

SECTION 6. ACCIDENTAL RELEASE MEASURES

LEAK / SPILL RESPONSE: Ensure that all spilled material is promptly cleaned up. Absorb with inert material such as vermiculite or paper towels, place in a chemical waste container for eventual disposal. Seal and label the container as waste. Dispose of in accordance with all federal, state, provincial and local regulations.

SPECIAL INSTRUCTIONS: Avoid contact with eyes, or prolonged contact with skin. Wash thoroughly after handling. Keep away from food, and out of reach of small children.

SECTION 7. HANDLING AND STORAGE



HANDLING PROCEDURES / EQUIPMENT: Keep containers closed when not in use.

STORAGE REQUIREMENTS: Store in a cool, dry area away from water-reactive chemicals such as sodium and potassium.

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SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses with side shields, or chemical splash goggles, are recommended when handling this product. SKIN PROTECTION: Protective gloves not normally required. People with sensitive skin may prefer to wear water-proof gloves, such as rubber or neoprene, to avoid skin contact.

ENGINEERING CONTROLS: No special ventilation requirements. Special respiratory protection is not required for normal conditions of use of this product.

EXPOSURE GUIDELINE LEVELS: N/Ap.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE : Liquid

ODOR AND APPEARANCE : No odor, clear liquid

ODOR THRESHOLD : N/Ap SPECIFIC GRAVITY (H₂O=1) : ~1.0

VAPOUR PRESSURE (mm HG) : Approximately that of water (24 mm Hg)

VAPOUR DENSITY (AIR=1) : 0.610 EVAPORATION RATE (BA=1) : 1.0

BOILING POINT (°F) : Approximately 200°F (93°C) FREEZING POINT (°F) : Approximately 27°F (-3°C)

pH : 7.0

COEFFICIENT OF WATER/OIL

DISTRIBUTION : N/Ap
DENSITY : .998
SOLUBILITY IN WATER : Soluble
% VOLATILE BY VOLUME : N/Av
VOC'S : Less than 1

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Normally stable.

CONDITIONS TO AVOID: Excessive heating.

MATERIALS TO AVOID (INCOMPATIBILITIES): Water-reactive chemicals such as sodium or potassium.

CONDITIONS OF REACTIVITY: N/Av

HAZARDOUS DECOMPOSITION BYPRODUCTS: If heated until water is driven off and decomposition begins, this product may release carbon dioxide, carbon monoxide, and oxides of nitrogen and sulphur.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11.TOXICOLOGICAL INFORMATION

LD50: N/Av LC50: N/Av

ROUTES OF ENTRY: INHALATION[N] EYE CONTACT[Y] SKIN CONTACT[N] SKIN ABSORPTION[N] INGESTION[N]

EXPOSURE LIMITS: N/Av

IRRITANCY OF PRODUCT: Not known to be irritating.

SENSITIZATION TO PRODUCT / MEDICAL CONDITIONS AGGRAVATED: Not known to cause allergies.

CARCINOGENICITY: No ingredients known to be carcinogens.

TERATOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICITY: No effects determined.

TOXICOLOGICAL DATA: N/Ap

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SECTION 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS: Not known. Not expected to have serious environmental effects in small quantities. IMPORTANT ENVIRONMENTAL CHARACTERISTICS: None known. Product is water-based. AQUATIC TOXICITY: Not known. Expected to have minimal toxicity.

SECTION 13. DISPOSAL CONSIDERATIONS

Place in a sealed container and label as waste. Place in a safe area, and comply with all federal, state, provincial and local regulations for disposal.

SECTION 14. TRANSPORTATION INFORMATION

SPECIAL SHIPPING INFORMATION : None

DOT HM-181 SHIPPING INFORMATION

PROPER SHIPPING NAME : Not regulated

HAZARD CLASS OR DIVISION : none UN NUMBER : none PACKAGING GROUP : none LABEL(S) REQUIRED : none

TDG SHIPPING INFORMATION

TDG SHIPPING NAME : Not regulated

TDG CLASSIFICATION : none
UN NUMBER : none
PACKING GROUP : none
LABEL(S) REQUIRED : none
NAERG : none

EMERGENCY TELEPHONE NUMBER : (613) 996-6666

INTERNATIONAL TRANSPORT INFORMATION

PROPER SHIPPING NAME : Not regulated

CLASS OR DIVISION : none SUBSIDIARY RISK : none HAZARDOUS LABEL(S) : none PACKAGING GROUP : none UN OR ID NUMBER : none

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA): The product on this MSDS, or all of its components, is listed under TSCA. SARA TITLE III, SECTION 313: The following ingredients are subject to the reporting requirements of section 313 of Title III of the Superfund and Reauthorization Act of 1986 and 40 CFR Part 372: None

CLEAN AIR ACT (CAA): The following ingredients appear on the List of Hazardous Air Pollutants (HAP – 42 USC 7412, Title I, Part A, p112): None

CLEAN WATER ACT (CWA): The following ingredients appear on the CWA List of Hazardous Substances (40 CFR 116.4): None CALIFORNIA PROPOSITION 65: The following ingredients appear on the Proposition 65 list(s): None

CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

DOMESTIC SUBSTANCES LIST (DSL): The product on this MSDS, or all of its components, is included in the DSL.

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SECTION 16. OTHER INFORMATION

N/E	Not Established
N/Av	Not Available
N/Ap	Not Applicable

IARC International Agency for Research on Cancer

ACGIH American Conference of Governmental Industrial Hygienists NIOSH National Institute for Occupational Health and Safety

Threshold Limit Values, Time Weighted Average TLV-TWA North American Emergency Response Guidebook **NAERG** Workplace Hazardous Materials Information System WHMIS

This MSDS format meets ANSI Z400.1-1998, OSHA 1910.1200 and WHMIS requirements. Cantesco Corporation provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Cantesco Corporation. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made. Cantesco Corporation is an ISO 9001:2000 registered company.

ADDITIONAL INFORMATION REPLY FORM - PLEASE FAX OR EMAIL BACK

PLEASE ADD ME TO YOUR MSDS DATA BASE FOR PRODUCT UPDATES:

NAME	TITLE / DEPT
FIRM	
ADDRESS	
CITY	
STATE / PROV	ZIP / POSTAL CODE
PHONE	FAX
EMAIL ADDRESS	

PLEASE SEND ME INFORMATION ON THE FOLLOWING CANTESCO® PRODUCTS:

WELDING CHEMICAL PRODUCTS	
AUTOMOTIVE, TRUCK & BUS FLEET WASH PRODUCTS	
CONSUMER CLEANING PRODUCTS	
INDUSTRIAL & INSTITUTIONAL CLEANERS	
HVAC CHEMICAL PRODUCTS	

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Odor Ammoniacal

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name MEND-CON PART 8 Recommended Use Hardener information on Manufacturer CHEMSEARCH DIV. OF NOT CORP.

Product Code 4784B Chemical Nature Ammonia solution **Emergency Telephone Number** CHEMTREC ® 800-424-9300

BOX 152170

IRVING, TX 75015

2. HAZARDS IDENTIFICATION

Emergency Overview CAUTION May cause skin irritation May cause eye irritation

May cause irritation of respiratory tract May be harmful if swallowed

Color Green

Potential Health Effects

Principle Route of Exposure

Primary Routes of Entry Acute Effects

Eves

Skin

Inhalation

ingestion

Chronic Effects

Target Organ Effects Aggravated Medical Conditions Potential Environmental Effects Physical State Liquid

Skin contact, Eye contact. None known.

May cause eye irritation. May cause skin irritation.

May cause irritation of respiratory tract.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Risk of infection of

the lung after prolonged inhalation of dust particles.

Eyes, Respiratory system.

Skin disorders. Respiratory disorders.

See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAŞ-No
Ammonium polyphosphate	68333-79-9
Ammonium Sulfate	7783-20-2

4. FIRST AID MEASURES

General Advice

Avoid contact with skin, eyes and clothing.

Eve Contact Skin Contact Inhalation

Notes to Physician

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion Drink 1 or 2 glasses of water. Do not induce vomiting. Get medical attention if symptoms occur.

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point

> 200°F / > 93°C

Method

Seta closed cup

Autoignition Temperature No information available Flammability Limits in Air Not applicable

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA HMIS

Health Health

1

Flammability Flammability 0 Instability Instability 0

0 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions **Environmental Precautions** Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Do not flush into surface water or sanitary sewer system.

Methods for Containment

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite)

and transfer to a container for disposal according to local / national regulations (see section 13)

Methods for Cleaning Up

Neutralizing Agent

Pick up and transfer to properly labelled containers. Not applicable



7. HANDLING AND STORAGE

Avoid contact with skin, eyes and clothing

Storage

Store in original container. Keep container tightly closed in a dry and well-ventilated place

Storage Temperature

Minimum 35°F / 2°C Maximum

120°F / 49°C

Storage Conditions

Indoor

Outdoor

Heated

Refrigerated

8, EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Ammonium polyphosphate	No data available	no data available	no data available
Ammonium Sulfate	No data available	no data available	no data available

Engineering Measures

Ensure adequate ventilation.

Personal Protective Equipment Eye/Face Protection

Safety glasses with side-shields.

Skin Protection

Neoprene gloves.

Respiratory Protection General Hygiene Considerations In case of inadequate ventilation wear respiratory protection.

Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash

contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Color

Liquid

Viscosity

Non viscous Ammoniaca!

Appearance

Green Transparent Odor рΗ Bulk Density

5.7 11.59

Specific Gravity

1.39 0.24 (Butyl acetate=1)

Percent Volatile (Volume)

49.2

Evaporation Rate VOC Content (%)

Vapor Pressure

11.5 mmHg @ 70 °F

Vapor Density

0.6

Solubility

Completely soluble

Boiling Point/Range

>212°F / 100°C

10. STABILITY AND REACTIVITY

Chemical Stability Conditions to Avoid Incompatible Products

Hazardous Decomposition Products Possibility of Hazardous Reactions

Stable, Hazardous polymerization does not occur.

Heating can release hazardous gases.

Bases, Metals.

Carbon oxides. Nitrogen oxides (NOx). Oxides of phosphorus. Sulfur oxides .

None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

No information available

Component Information

Acute toxicity

Alishdright polyphosphale 4740 mg/kg (Tail) no data available 10 4040 4050 4050 4050 4050 4050 4050 4	Other	Oth	Draize Test	LC50 Inhalation	LD50 Dermal	LD50 Oral	Component
American Cutate 2000 molito (Pat) no data available no data available on data available 0.0 data available	ta available	no data a	no data available	nc data available	no data available	4740 mg/kg (Rat)	
Ammerican Soliate 2000 mg/kg (Nat) 110 data available 110 data available 110 data available 110 data available	a available	no data a	no data available	no data available	no data available	2000 mg/kg (Rat)	Ammonium Sulfate

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Ammonium polyphosphate	no data available	no data available	no data available	no data available	no data available
Ammonium Sulfate	no data available	no data available	no data available	no data available	no data availabie

Carcinogenicity

]	Component	ACGIH	IARC	NTP	OSHA	Other
Ì	Ammonium polyphosphate	not applicable				
- 1	Ammonium Sulfate	not applicable				

12. ECOLOGICAL INFORMATION

Product Information

No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Ammonium polyphosphate	no data available	LC50> 500 mg/L Brachydanio rerio 96 h	no data available	no data available	N/A
Ammonium Sulfate	no data available	LC50 460 - 1000 mg/L Leuciscus idus 96 h	no data available	EC50 = 14 mg/L 48 h	-5.1
		LC50= 18 mg/L Cyprinus carpio 96 h		EC50 = 423 mg/L 24 h	
	1	LC50= 250 mg/L Brachydanio rerio 96 h			
		LC50> 100 mg/L Pimephates prometas 96 h			

Persistence and Degradability Bioaccumulation

No information available No information available Mobility

No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal Container Disposal Dispose of as hazardous waste in compliance with local and national regulations Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

Not regulated

TDG

Not regulated

ICAO

Not regulated

IATA

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION

Inventories

TSCA DSL

Complies Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

ı	Component	CAS-No	Weight %	SARA 313 - Threshold Values	
	Ammonium Sulfate	7783-20-2	1-5	1.0	

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure	Reactive Hazard
110000			Hazard	
Yes	No	No	No	No .
CERCIA				

OEKOEA		
Component	Hazardous Substances RQs	CERCLA EHS RQs
Ammonium polyphosphate	Not applicable	Not applicable
Ammonium Sulfate	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2B Toxic materials.



16. OTHER INFORMATION

Prepared By

Supercedes Date

Issuing Date

Mike McDowell 03/03/2004 09/11/2008

Reason for Revision

No information available

No information available

Glossary List of References

No information available

CHEMSEARCH DIV. OF NCH CORP, assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated wint such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Odor Amine-lik

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DURA-GARD AEROSOL

Product Code

5014

nation on Manufacturer

CHAISEARCH DIV. OF NCH CORP.

BOX 152170 IRVING, TX 75015 Recommended Use Cleaning agent

Chemical Nature Petroleum distillates Amines Mixture

Emergency Telephone Number

CHEMTREC ® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview

Danger

Corrosive

Harmful if inhaled and may cause delayed lung injury

Causes skin burns Causes eve burns Harmful or fatal if swallowed

Color Yellow - Tan

Potential Health Effects

Principle Route of Exposure

Primary Routes of Entry

Acute Effects

Eves

Ingestion

Chronic Effects

Skin Inhalation

Target Organ Effects

Aggravated Medical Conditions Interactions with Other Chemicals Potential Environmental Effects

Physical State Liquid

Inhalation, Skin Absorption.

Skin contact, Eye contact, Inhalation.

Causes eve burns.

Causes skin burns. May be absorbed through the skin in harmful amounts.

Harmful by inhalation. Causes burns. Causes headache, drowsiness or other effects to the central nervous system.

ingestion causes burns of the upper digestive and respiratory tracts. May be fatal if swallowed.

Liver and kidney injuries may occur, Inhaled corrosive substances can lead to a toxic edema of the lungs. Causes adverse

cardiovascular effects. May cause irregular heartbeats, especially under conditions of stress.

Central nervous system, Kidney, Liver, Respiratory system, Heart.

Kidney disorders. Liver disorders. Skin disorders. Respiratory disorders. Neurological disorders.

Use of alcoholic beverages may enhance toxic effects. See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	
Butane	106-97-8	
Morpholine	110-91-8	
Calcium carbonate	471-34-1	
Calcium Sulfonate	61789-86-4	
Petroleum distillates, solvent-refined heavy paraffinic (<3% DMSO extractable)	64741-68-4	
Petroleum distillates, solvent-refined light paraffinic (<3% DMSO extractable)	64741-89-5	
Petroleum distillates, hydrotreated light	64742-47-8	
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	
Isopropyt alcohol	67-63-0	
Propane	74-98-6	
Tall oil fatty acid morpholine salt	68002-77-7	

4. FIRST AID MEASURES

General Advice Eye Contact

Skin Contact

Inhalation

Ingestion

Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist .

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Get medical attention immediately.

Remove/Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately. Wash contaminated clothing before re-use.

Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention

Drink 1 or 2 glasses of water. Do not induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person

The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. Notes to Physician

5. FIRE-FIGHTING MEASURES

Flash Point

110°F / 43°C

Method

Upper 12.7

Seta closed cup

Autoignition Temperature No information available Flammability Limits in Air Mixture

Sultable Extinguishing Media

Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Hazards Arising from the Chemical Sr

vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions. Flame extension: >18 inches / 45 cm and Burnback: 5 inches / 13 cm.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

3

Aerosol Level (NFPA 30B) -

NFPA Health

Flammability

Instability

0

Lower 0.7

5014 - DURA-GARD AEROSOL Issuing Date 14-Oct-2008 Flammability HMIS Health Instability 6, ACCIDENTAL RELEASE MEASURES Remove all sources of ignition. Ensure adequate ventilation, Use personal protective equipment. Prevent further leakage or spillage it Personal Precautions safe to do so. Material can create slippery conditions. mental Precautions Do not flush into surface water or sanitary sewer system. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to Methods for Containment container for disposal according to local / national regulations (see section 13) Methods for Cleaning Up Pick up and transfer to properly labelled containers. Neutralizing Agent Not applicable 7. HANDLING AND STORAGE Keep away from open flames, hot surfaces and sources of ignition. Do not get in eyes, on skin, or on clothing. Do not breathe vapor Handling or spray mist . Keep away from open flames, hot surfaces and sources of ignition. Storage Maximum 120°F / 49°C Minimum 35°F / 2°C Storage Temperature Refrigerated Heated Storage Conditions Indoor Outdoor 8. EXPOSURE CONTROLS / PERSONAL PROTECTION **Exposure Guidelines** OSHA PEL NIOSH ACGIH TLV Component TWA: 800 ppm no data availab TWA: 1000 ppm TWA: 1900 mg/m³ TWA: 20 ppm IDLH: 1400 ppm Morpholine TWA: 20 ppm STEL 105 mg/m³ TWA: 70 mg/m³ Skin STEL 30 ppm Skin TWA: 20 ppm TWA: 70 mg/m³ Calcium carbonate No data available TWA: 15 mg/m³ TWA: 5 mg/m³ TWA: 5 mg/m³ TWA: 10 mg/m³ no data available no data available Calcium Sulfonate No data available Petroleum distillates, solvent-refined heavy paraffinic (<3% DMSO IDLH: 2500 ma/m TWA: 5 mg/m3 TWA: 5 mg/m³ extractable) STEL: 10 mg/m³ STEL: 10 mg/m³ TWA: 5 mg/m³ IDLH: 2500 mg/m Petroleum distillates, solvent-refined light paraffinic (<3% DMSO TWA: 5 mg/m³ TWA: 5 mg/m³ STEL: 10mg/m³ extractable) STES: 10 mg/m³ TWA: 5 mg/m³ no data available No data available no data available Petroleum distillates, hydrotreated light no data available no data available Solvent naphtha (petroleum), medium aliphatic No data available IDLH: 2000 ppm TWA: 400 ppm Isopropyi alcohol TWA: 200 ppm STEL 1225 mg/m³ TWA: 980 ma/m³ STEL: 400 ppm STEL 500 ppm TWA: 980 mg/m³ TWA: 400 ppm TWA: 1000 ppm TWA: 1000 ppm IDI.H: 2100 ppm Propane TWA: 1000 ppm TWA: 1800 mg/m³ TWA: 1800 mg/m³ no data avaitable Tall oil fatty acid morpholine sett No data available no data available Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas. Engineering Measures Personal Protective Equipment Tightly fitting safety goggles. Face-shield. Eye/Face Protection Skin Protection Impervious gloves. Impervious clothing. Use NIOSH approved respiratory protection. Respiratory Protection Ensure that eyewash stations and safety showers are close to the workstation location. Wear protective gloves/clothing. **General Hygiene Considerations** 9. PHYSICAL AND CHEMICAL PROPERTIES Viscosity Slight Viscous Liquid Physical State Odor Amine-like Color Yellow - Tan Not applicable Appearance Opaque No data available 0.805 **Bulk Density** Specific Gravity Percent Volatile (Volume) 76.3 24.4 **Evaporation Rate** 1490 mmHg @ 70 °F 63,1 Vapor Pressure VOC Content (%) Solubility Negligible Vapor Density 1.7 320°F / 160°C **Boiling Point/Range** 10. STABILITY AND REACTIVITY

> Stable. Hazardous polymerization does not occur. Keep away from open flames, hot surfaces, and sources of ignition.

Strong oxidizing agents. Reducing agents. Strong acids. Bases.

Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Aldehydes, Ketones, Organic acids,

Peroxides.

None under normal processing

lity of Hazardous Reactions

11. TOXICOLOGICAL INFORMATION

Hazardous Decomposition Products

Chemical Stability

Product Information

Conditions to Avoid

incompatible Products

No information available

Component Information

Acı	ste	tox	icitv

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Butane	no data availabte	no data available	658 mg/L (Rat) 4 h	no data available	no data available
Morpholine	1050 mg/kg (Rat)	310 mg/kg (Rabbit)	no data avaitable	no data avaijable	no data available
Calcium carbonate	6450 mg/kg (Rat)	no data available	no data avaitable	no data available	no data available
Calcium Sulfonate	5000 mg/kg (Rat)	4000 mg/kg (Rabbit)	no data available	no data available	no data available
Petroleum distillates, solvent-refined heavy paraffinic (<3% DMSO extractable)	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat) 4 h	no data available	no data available
Petroleum distillates, solvent-refined light paraffinic (<3% DMSO extractable)	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat) 4 h	no data available	no data available
Petroleum distiliates, hydrotreated light	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5.2 mg/L (Rat) 4 h	no data available	no data available
Solvent naphtha (petroleum), medium aliphatic	5000 mg/kg (Rat)	3000 mg/kg (Rabbit)	5.26 mg/L (Rat) 4 h	no data available	no data available
Isopropyl alcohol	4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h	no data available	no data available
Propane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
Tall oil fatty acid morpholine salt	no data available	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Butane	no data available	no data available	no data available	no data available	CNS, liver, heart
Marpholine	no data available	no data available	no data available	no data available	skin, eyes, respiratory system, liver, kidneys
Calcium carbonate	ne data available	no data available	no data available	no data available	respiratory system, skin, eyes
Calcium Sulfonate	no data available	no data available	no data available	no data available	no data available
Petroleum distillates, solvent-refined heavy paraffinic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	no data available
Petroleum distillates, solvent-refined light paraffinic (<3% DMSO extractable)	no data available	no data avaitable	no data available	no data available	no data available
Petroleum distillates, hydrotreated light	no data available	no data available	no data available	no data available	CNS, cardiovascular system
Solvent naphtha (petroleum), medium aliphatic	no data available	no data available	no data available	no data available	CNS, liver, kidneys
Isopropyt alcohol	no data available	no data available	no data available	no data available	eyes, skin, respiratory system, kidney
Propane	no data available	no data available	no data available	no data available	CNS, liver, heart
Tall oil fatty acid morpholine salt	no data available	no data available	no data available	no data available	no data available

Carcinogenicity

Component	ACGIH	IARC
Butane	not applicable	not applicable
Morpholine	not applicable	not applicable
Cafcium carbonate	not applicable	not applicable
Calcium Sulfonate	not applicable	not applicable
Petroleum distillates, solvent-refined heavy paraffinic (<3% DMSO extractable)	not applicable	not applicable
Petroleum distillates, solvent-refined light paraffinic (<3% DMSO extractable)	not applicable	not applicable
Petroleum distillates, hydrotreated light	not applicable	net applicable
Solvent naphtha (petroleum), medium aliphatic	not applicable	not applicable
Isopropyl alcohol	not applicable	not applicable
Propane	not applicable	not applicable
Tall oil fatty acid morpholine salt	not applicable	not applicable

Component	NTP	OSHA	Other
Butane	not applicable	not applicable	not applicable
Morpholine	not applicable	not applicable	not applicable
Caldum carbonate	not applicable	not applicable	not applicable
Caldium Suffonate	not applicable	not applicable	not applicable
Petroleum distillates, solvent-refined heavy paraffinic (<3% DMSO extractable)	not applicable	not applicable	not applicable
Petroleum distillates, solvent-refined light paraffinic (<3% DMSO extractable)	not applicable	not applicable	not applicable
Petroleum distillates, hydrotreated light	not applicable	not applicable	not applicable
Solvent naphtha (petroleum), medium aliphatic	not applicable	not applicable	not applicable
Isopropyl alcohol	not applicable	not applicable	not applicable
Propane	not applicable	not applicable	not applicable
Tall oil fatty acid morpholine salt	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information

No information available

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Butane	no data available	no data available	no data available	no data available	2.89
Morpholine	EC50= 28.0 mg/L Chlorella vulgaris	LC50= 350.0 mg/L Lepomis macrochirus 96 h	EC50 = 57.0 mg/L 30 min	EC50 = 100,0 mg/L 24 h	-2.55
	96 h	·			
	EC50= 28.0 mg/L. Selenastrum		<u> </u>		
	capricornutum 96 h				
Calcium carbonate	no data available	no data available	no data available	no data available	N/A
Calcium Sulfonate	no data available	LC50 5.7 - 9.7 mg/L Pimephales promelas 96 h	no data available	EC50 6.2 - 12 mg/L 48 h	N/A
Petroleum distillates, solvent-refined heavy paraffinio	no data available	1,C50> 5000 mg/L Oncorhynchus mykiss 96 h	no data available	EC50 > 1000 mg/L 48 h	N/A
(<3% DMSO extractable)]				
Prom distillates, solvent-refined light paraffinic	no data available	LC50> 5000 mg/L Oncorhynchus mykiss 96 h	по data available	EC50 > 1000 mg/i 48 h	N/A
(<3% DMSO extractable)	1				1
etroleum distillates, hydrotreated light	no data available	LC50= 1740 mg/L Lepomis macrochinus 96 h	no data available	LC50 = 4720 mg/L 96 h	N/A
•		LC50= 45 mg/L Pirnephales promelas 96 h			1
Solvent naphtha (petroleum), medium aliphatic	EC50= 450 mg/L Selenastrum	LC50= 800 mg/L Pimephales promelas 96 h	no data available	EC50 > 100 mg/t, 48 h	N/A
	capricomutum 96 h				1
Isopropyl alcohol	EC50> 1000 mg/L Scenedesmus	LC50= 61200 mg/L Pimephales prometas 96 h	EC50 = 35390 mg/L 5 min	EC50 = 13299 mg/L 48 h	0.05
,	subspicatus 72 h	LC50= 94900 mg/L Pimephales promelas 96 h	_		1
	EC50> 1000 mg/l, Scenedesmus	LC50= 9640 mg/L Pimephales prometas 96 h			i

	subspicatus 96 h				
Propane	no data available	no data available	no data available	no data available	2.3
Tall oil fatty acid morpholine salt	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability

Bioaccumulation

No information available No information available No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal Container Disposal

Dispose of as hazardous waste in compliance with local and national regulations Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

DOT Proper Shipping Name Consumer commodity

Hazard Class

QRM-D

Aerosols

Description

Consumer commodity ,ORM-D,

TDG

Proper shipping name **Hazard Class** UN-No

UN1950 AEROSOLS, 2.1, UN1950 Description

ICAO

HN1950 UN-No **Proper Shipping Name** Aerosols Hazard Class 2.1

Aerosols, UN1950 **Shipping Description**

MATA

UN-No UN1950

Proper Shipping Name Aerosols, flammable

Hazard Class 2.1 ERG Code 10L

UN1950, Aerosois, flammable, 2.1 **Shipping Description**

IMDG/IMO

Proper Shipping Name Aerosols **Hazard Class** UN-No UN1950 EmS No. F-D, S-U

Shipping Description UN1950, Aerosols,2

15. REGULATORY INFORMATION

Inventories

TSCA DSL

Complies Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements or the Act and and Title 40n of the Code of Federal Regulations, Part 372:

	Component	CAS-No	Weight %	SARA 313 - Threshold Values
į	Isopropyl alcohol	67-63-0	1-5	1.0

SARA 311/312 Hazardous Categorization Acute Health Hazard

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No
RCLA				
Com	ponent	Hazardous Substances	RQs	CERCLA EHS RQs
Bi	ıtane	Not applicable		Not applicable
Mor	pholine	Not applicable		Not applicable
Calcium	carbonate	Not applicable		Not applicable
Calcium	Sulfonate	Not applicable		Not applicable
Petroleum distillates, solvent-re	lined heavy paraffinic (<3% DMSO	Not applicable		Not applicable
extra	actable)			
etroleum distillates, solvent-refined	light paraffinic (<3% DMSO extractable)	Not applicable		Not applicable
Petroleum distillat	es, hydrotreated light	Not applicable		Not applicable
Solvent naphtha (petri	eleum), medium aliphatic	Not applicable		Not applicable
Isoprop	yl alcohol	Not applicable		Not applicable
Pro	ppane	Not applicable		Not applicable
Tall oil fatty ac	id morpholine salt	Not applicable		Not applicable

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the

WHMIS Hazard Class

B5 Flammable aerosol, A Compressed gases, E Corrosive material , D2B Toxic materials .



16. OTHER INFORMATION

Prepared By Supercedes Date Issuing Date Reason for Revision Mike McDowell 03/06/2006 10/14/2008

Reason for Revision Glossary List of References No information available No information available No information available

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner no recommended on the product label. Users assume all risks associated wiht such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.





Material Safety Data Sheet: OPEN ROAD PLUS

Supercedes Date 11/13/2003

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name OPEN ROAD PLUS Recommended Use Ice melting compound Information on Manufacturer CHEMSEARCH DIV. OF NCH CORP.

BOX 152170 IRVING, TX 75015

Product Code **റാദദ** Chemical Nature Aqueous solution **Emergency Telephone Number** CHEMTREC ® 800-424-9300

Issuing Date 07/24/2008

Odor Odorless

2. HAZARDS IDENTIFICATION

Emergency Overview CAUTION May cause skin imitation May cause eye irritation May cause irritation of respiratory tract

May be harmful if swallowed

Physical State Liquid

Color Green

Potential Health Effects

Principle Route of Exposure

Primary Routes of Entry

Acute Effects

Eves Skin

Inhalation

Ingestion

Chronic Effects **Target Organ Effects**

Aggravated Medical Conditions Potential Environmental Effects Skin contact. Eve contact.

Skin Absorption.

May cause eye irritation.

May cause skin irritation. May cause irritation of respiratory tract.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

None known. None Know. None known.

See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Magnesium Chloride Hexahydrate	7791-18-6

4. FIRST AID MEASURES

General Advice

Avoid contact with skin, eyes and clothing. If symptoms persist, call a physician.

Eve Contact

Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Inhalation

Wash off with plenty of water. Get medical attention if irritation develops and persists. Remove person to fresh air. If signs/symptoms continue, get medical attention.

Ingestion

Consult a physician if necessary.

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point

> 201°F / > 94°C

Method

Seta closed cup

Autoignition Temperature No information available

Suitable Extinguishing Media

The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Chemical

Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA **HMIS** Health Health

Flammability Flammability 0

Instability Instability

0

6. ACCIDENTAL RELEASE MEASURES 1900

Personal Precautions

Avoid contact with the skin and the eyes.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Methods for Containment Methods for Cleaning Up

No information available

Wear suitable protective equipment. Material can create slippery conditions. Prevent further leakage or spillage. Soak

up with inert absorbent material. Pick up and transfer to properly labelled containers.

7. HANDLING AND STORAGE



0288 - OPEN ROAD PLUS

Handling

Handle in accordance with good industrial hygiene and safety practice.

Storage Storage Temperature Keep containers tightly closed in a dry, cool and well-ventilated place

Storage Conditions

Minimum Indoor

Outdoor

Heated

35°F / 2°C Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Magnesium Chloride Hexahydrate	No data available	по data available	no data available

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

120°F / 49°C

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields.

Skin Protection Neoprene gloves.

Respiratory Protection General Hygiene Considerations Use NIOSH approved respiratory protection. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Liquid

Viscosity

Non viscous

Color Appearance Green Transparent Odor pН

Odorless

Specific Gravity

1.26

Bulk Density

No data available

Evaporation Rate VOC Content (%) 0.43 (Butyl acetate=1)

Percent Volatile (Volume) Vapor Pressure

12.9 mmHg @ 70 °F

Vapor Density

0.6

Solubility

Completely soluble

Boiling Point/Range

244.6°F / 118°C

No information available

10. STABILITY AND REACTIVITY

Chemical Stability **Conditions to Avoid**

Incompatible Products

Decomposition temperature °F **Hazardous Decomposition Products** Possibility of Hazardous Reactions

Stable. None known.

Strong oxidizing agents. No data available Hydrogen chloride gas.

None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The product itself has not been tested

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermai	LC50 Inhalation	Draize Test	Other
Magnesium Chloride Hexahydrate	8100 mg/kg (Rat)	no data available	no data available	no data available	no data available
	·			***************************************	

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Magnesium Chloride Hexahydrate	no data available	no data available	no data avaitable	no data available	no data available

Carcinogenicity

There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Magnesium Chloride Hexahydrate	not applicable				

12. ECOLOGICAL INFORMATION

Product Information

No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Magnesium Chloride Hexahydrate	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability

No information available No information available

Bioaccumulation Mobility

No information available

13 DISPOSAL CONSIDERATIONS

Product Disposal **Container Disposal** Dispose of in accordance with local regulations

Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories

TSCA Complies DSL Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard Fire Hazard Sudden Release of Pres		Sudden Release of Pressure	Reactive Hazard
			Hazard	l l
Yes	No	No	No	No
CERCLA				

Component	Hazardous Substances RQs	CERCLA EHS RQs
Magnesium Chloride Hexahydrate	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2B Toxic materials.

16. OTHER INFORMATION

 Prepared By
 Kamal Singh

 Supercedes Date
 11/13/2003

 Issuing Date
 07/24/2008

Reason for Revision No information available
Glossary No information available
List of References No information available

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.



MATERIAL SAFETY DATA SHEET: NC-123 PLUS AEROSOL

Section I - General Information

(000000-000000- - 5625)

Date of Issue:

10/1/2007 12:00:00 AM

Chemical Name & Synonyms:

Chemical Family: Solvent mixture

Manufacturer Name:

CHEMSEARCH DIV. OF NCH CORP.

Manufacturer Address:

BOX 152170 **IRVING, TX 75015**

Prepared By:

M MCDOWELL/CHEMIST

ENTERED

MAR 197009

Supercedes:

9/14/2004 12:00:00 AM

Trade Name & Synonyms:

NC-123 PLUS AEROSOL

Formula is a mixture: [√]

Product Code Number:

Emergency Phone Number:

800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)

ALIPHATIC PETROLEUM DISTILLATES

BARIUM SULFONATE

PROPANE

N-BUTANE

\$ Stoddard solvent values

* Barium soluble compounds

** Aliphatic hydrocarbon gases

#64742-47-8, 64742-88-7, 8052-41-3

Hazard TLV IRR/COMB

IRRITANT FLAM/ASPHY FLAM/ASPHY 100 ppm \$1 0.5mg/m3*1 1000ppm**1

1000ppm**1

500 ppm \$2 0.5mg/m3*2 1000 ppm 1

N/E 2

PEL

STEL CAS# N/E N/E

61790-48-5

74-98-6 N/E N/E 106-97-8

Section III - Physical Data

Boiling Point (°F): 300

Vapor Pressure (mm Hg): 1273

Vapor Density (Air=1): 1.9

pH @ 100%: N/A

H₂0 Solubility: Negligible

% Volatile by Volume: 92

Specific Gravity (H₂0=1): 0.74

Color: Amber

Odor: Solvent

Clarity: Transparent

Evaporation Rate (BuAc=1): 21.9

Viscosity: NON-VISCOUS

Section IV - Fire and Explosion Hazard

Flash Point: 106°F

Flammable Limits: Product mixture

LEL: 0.8

Method Used: Setaflash

UEL: 9.5

Aerosol Level (NFPA 30B): 3

- Extinguishing Media:

[√] Foam [v] Dry Chemical [] Alcohol Foam [√] Water Spray

[v] CO2 [] Other

NFPA 704 Hazard Rating: -

4-Extreme 3-High

Health: 1

2-Moderate

Flammability: 4

1-Slight

Instability: 0

0-Insignificant

Special:

Special Fire Fighting Procedures:

Firefighters should wear a self-contained breathing apparatus and full protective gear. Cool fire-exposed containers with water spray to prevent

MATERIAL SAFFTY DATA SHEET: NC-123 PLUS AEROSOL

bursting.



Unusual Fire and Explosion Hazards:

Vapors are heavier than air and may travel to distant and/or low-lying sources of ignition and flashback. Product may produce a floating fire hazard as liquid floats on water. The use of water spray (fog), while effective, may cause frothing and foaming. Never use a water jet as this will just spread the fire. Use care as spills may be slippery. Flame extension is 24 inches, burnback is 4 inches.

Section V - Health and Hazard Data

Threshold Limit Value:

Not Established for Mixture. See Section II.

Effects of Overexposure:

Acute: (Short Term Exposure)

EYE CONTACT: Causes irritation seen as stinging, tearing, redness, blurred vision, and a burning sensation.

SKIN CONTACT: Causes irritation seen as itching, redness, and a burning sensation. Injection under the skin, in muscle, or into the blood stream can cause irritation, inflammation, swelling, fever, and systemic effects, and mild central nervous system depression. Injection of pressurized Hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Prolonged or repeated contact, as from clothing wet with material, may cause drying, defatting, and cracking of the skin.

INHALATION: May cause respiratory irritation seen as coughing and sneezing. At low vapor concentrations, no harmful effects are expected. At high vapor concentrations, inhalation may cause central nervous system effects such as headache, dizziness, drowsiness, weakness, unconciousness, possible anesthetic effects from central nervous system depression, and may be fatal.

INGESTION: May cause irritation with possible nausea, vomiting, and diarrhea. Ingestion and subsequent vomiting of this product can lead to aspiration of the product into the lungs which can cause damage and may be fatal. This product contains Barium compounds, which upon ingestion may be metabolized by the body to form Barium Chloride, a toxic material. Symptoms include acute gastroenteritis, loss of deep reflexes, prostration, muscle tremors, muscular paralysis related to severe hypokalemia, respiratory failure, and cardiac arrest.

Chronic: (Long Term Exposure)

On rare occasions, prolonged and repeated exposure to Hydrocarbon Mist poses a risk of chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and coughing are the most common symptoms. Aspiration may lead to pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiration and heart rates as well as a bluish discoloration of the skin. Chronic skin contact may promote dermatitis and oil acne. In rarer cases, an increased sensitivity to sunlight (photosensitivity) may occur. Chronic abuse of similar materials has been associated with irregular heart rhythms and cardiac arrest. Medical conditions aggravated by exposure are pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis; pre-existing heart rhythm conditions.

TARGET ORGANS: Central Nervous System, cardiovascular system, heart, and liver. The primary routes of exposure are skin and eye contact.

Primary Routes of	of Entry ————	A STATE OF THE STA
[√] Inhalation	[] Ingestion	[] Absorption

Emergency First Aid Procedures:

Inhalation

Remove from the area to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult.

Eye Contact

Rinse the eyes with water. Remove any contact lenses and continue flushing with plenty of water for several minutes. Seek medical attention if irritation develops.

Skin Contact:

Wash affected areas with large amounts of soap and water for 15 minutes. Remove contaminated clothing and shoes. Seek medical attention if irritation persists. Wash clothing and clean shoes before re-use.

Ingestion:

Give 3 to 4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

Notes to Physician:

Ingestion and subsequent vomiting of this product can lead to aspiration of the product into the lungs which can cause damage and may be fatal. Depending on the amount ingested and retained as well as the toxicity of the product, gastric lavage should be considered. Keep patient's head below hips to prevent pulmonary aspiration. If comatose, a cuffed endotracheal tube will prevent aspiration. In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:								
[]IARC	[]NTP	[]OSHA	[] ACGIH	[] Other				
Two residences are a second se		······································						

VOC Content: 90% by weight; 92% by volume, 663 g/L



MATERIAL SAFETY DATA SHEET: NC-123 PLUS AEROSOL



OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in publication No. 87-116 or ANSI Z88.2-1992.

Glove Protection

Neoprene or nitrite rubber gloves if repeated or prolonged skin contact is likely. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for hand protection, 29 CFR 1910.138.

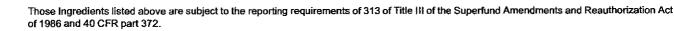
Eve Protection:

Safety glasses with side shields if the method of application presents the likelihood of eye contact. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

Other Protection:

Wear general-duty work clothes and shoes. A safety shower and an eyewash station should be available. Remove soaked clothing and shoes. Wash clothing and clean shoes before re-use.

Section X - Storage and Handling Information								
Storage Temperature		Storage Conditi	Storage Conditions					
Max: 120°F	Min: 30°F	[√] Indoors	[] Outdoors	[] Heated	[] Refrigerated			
Other Precautions:		t lights, static electricity, ar tire label before using the	·	el directions.				
		Section XI - Reg	gulatory Inforr	mation				
Chemical Name		C	AS Number	Upper % I	<u>imit</u>			
BARILIM COMPOUND	S	N.	'A	5				



Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of

Section XII - References

- 1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
- 2. OSHA PEL.
- 3. Vendor's MSDS.
- 4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007.
- 5. European Chemical Substances Information System (ESIS), International Uniform Chemical Information Database (IUCLID) Chemical Data Sheets.

All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing.

IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, SKN: Skin, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pensky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, HMN: Human, mg/m3: Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP, assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

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MATERIAL SAFETY DATA SHEET: CLEAR GUARD AEROSOL

Section I - General Information

(000000-000000- - 5687)

Date of Issue:

11/14/2007 12:00:00 AM

Chemical Name & Synonyms:

N/A

Chemical Family:

Aliphatic/Aromatic hydrocarbon blend

Manufacturer Name:

CHEMSEARCH DIV. OF NCH CORP.

Manufacturer Address:

BOX 152170 **IRVING, TX 75015**

Prepared By:

M MCDOWELL/CHEMIST

Supercedes:

8/20/2004 12:00:00 AM

Trade Name & Synonyms:

CLEAR GUARD AEROSOL

Formula is a mixture: [v]

Product Code Number:

5687

Emergency Phone Number:

800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS#
XYLENE	IRR/FLAM	100 ppm 1	100 ppm 2	N/E	1330-20-7
STYRENE POLYMER WITH 1,3 BUTADIENE	IRRITANT	N/E 1	N/E 2	N/E	9003-55-8
N-HEXANE	IRR/FLAM	50 ppm \$1	500 ppm 2	N/E	110-54-3
PROPANE	FLAM/ASPHY	1000 ppm*1	1000 ppm 2	N/E	74-98-6
BUTANE	FLAM/ASPHY	1000 ppm*1	N/E 2	N/E	106-97-8
ACETONE	IRR/FLAM	500 ppm 1	1000 ppm 2	750 ppm 1	67-64-1
TOLUENE	IRR/FLAM	20 ppm 1	200 ppm 2	300 ppm 2	108-88-3
\$ SKIN					

^{*} Aliphatic hydrocarbon gases

Section III - Physical Data

Boiling Point (°F): N/E

Vapor Pressure (mm Hg): <75 psi

Vapor Density (Air=1): >1

pH @ 100%: N/A

% Volatile by Volume: 88

H₂0 Solubility: Negligible

Specific Gravity (H₂0=1): 0.77

Color: Colorless-Lt yellow

Odor: Aromatic solvent

Clarity: Transparent-hazy

Evaporation Rate (BuAc=1): <1

Viscosity: Semi-viscous

Section IV - Fire and Explosion Hazard

Flash Point: -10°F

Flammable Limits: Product mixture

LEL: 0.9%

Method Used: Setaflash

UEL: 12.8%

Aerosol Level (NFPA 30B): 3

Extinguishing Media:

[]Foam [√] Dry Chemical [] Alcohol Foam

[√] Water Spray

[√] CO2 [√] Other NFPA 704 Hazard Rating:

4-Extreme 3-High

Health: 2

Flammability: 4

2-Moderate 1-Slight

Instability: 0

0-Insignificant

Special:



MATERIAL SAFETY DATA SHEET: CLEAR GUARD AEROSOL

Special Fire Fighting Procedures:

Firefighters should wear a self-contained breathing apparatus and full protective gear. Cool fire-exposed containers with water spray to prevent bursting.



Unusual Fire and Explosion Hazards:

Vapors are heavier than air and may travel to distant and/or low-lying sources of ignition and flashback. Product may produce a floating fire hazard as liquid floats on water. The use of water spray (fog), while effective, may cause frothing and foaming. Never use a water jet as this will just spread the fire. Use care as spills may be slippery. Flame extension is >30 inches, burnback is 6 inches.

Section V - Health and Hazard Data

Threshold Limit Value:

Not Established for Mixture. See Section II.

Effects of Overexposure:

Acute: (Short Term Exposure)

EYE CONTACT: Causes irritation seen as tearing and redness.

SKIN CONTACT: May cause irritation seen as itching and redness. Product may be absorbed through the skin in harmful amounts. Prolonged or repeated contact as from clothing wet with material may cause drying, defatting, and cracking of the skin.

INHALATION: May cause respiratory irritation seen as coughing and sneezing. At low vapor concentrations, no harmful effects are expected. At high vapor concentrations, inhalation may cause central nervous system effects such as headache, dizziness, drowsiness, weakness, unconsciousness, possible anesthetic effects from central nervous system depression, and may be fatal.

INGESTION: May cause irritation with possible nausea, vomiting, and diarrhea, May cause central nervous system effects similar to inhalation.

Chronic: (Long Term Exposure)

Chronic inhalation may cause damage to liver and kidneys. Chronic inhalation of solvents like Xylene and Toluene have caused heartbeat irregularity, heartbeat increase, and permanent central and peripheral nervous system damage, resulting in decreased learning ability, loss of memory, personality changes, and disturbances in gait. A condition known as "painter's syndrome" can occur causing a loss of sensation in the arms and hands (peripheral neuropathy). Prolonged or repeated exposure may cause cardiac sensitization. Chronic skin contact may promote dermatitis and oil acne. In rarer cases, an increased sensitivity to sunlight (photosensitivity) may occur.

Medical conditions aggravated by exposure are pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis, preexisting neurological conditions, hepatic and renal conditions, cardiovascular, and auditory system conditions.

Target organs: Central and peripheral nervous systems, heart, kidneys, liver, blood, and auditory system. The primary routes of exposure are skin and eye contact.



Primary Routes of Entry

[√] Inhalation

[√] Ingestion

[√] Absorption

Emergency First Aid Procedures:

Inhalation:

Remove from the area to fresh air. If not breathing, clear the airway and start mouth to mouth artificial respiration. Get immediate medical attention.

Eye Contact:

Rinse the eyes with water. Remove any contact lenses and continue flushing with plenty of water for several minutes. Seek medical attention if irritation develops.

Skin Contact:

Wash affected areas with plenty of soap and water for several minutes. Seek medical attention if irritation develops.

Ingestion

Give 3 to 4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Seek medical attention if discomfort occurs.

Notes to Physician:

There is no specific antidote. Treat the patient symptomatically.

Section VI - Toxicity Information

- Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:								
[]IARC	[]NTP	[]OSHA	[] ACGIH	[]Other				

VOC content: 88% by weight, 792 g/L

MIR content: 1.50



ORL-RAT LD₅₀: 4300 mg/kg 3.

IHL-RAT LC₅₀: 5000 ppm/4h 3.

IHL-HMN LC_{I o}: 1000 ppm/6h 3.

SKN-RBT LD₅₀: >1700 mg/kg 3.



MATERIAL SAFETY DATA SHEET: CLEAR GUARD AFROSOL

SKN-RBT SDT: 500 mg/24h moderate 3. EYE-RBT SDT: 5 mg/24h severe 3.



Xylene causes hearing loss, cardiac stimulation, and arrhythmia (irregular heart beat) in laboratory animals. 4.

STYRENE POLYMER WITH 1,3 BUTADIENE

EYE-RBT SDT: 500 mg/24h mild 3.

N-HEXANE

ORL-RAT LD₅₀: 25 gm/kg 4.

IHL-RAT LC₅₀: 48,000 ppm/4h 6.

IHL-HMN TC_{1.0}: 190 ppm/8w 4.

SKN-RBT LD₅₀: 3000 mg/kg 6.

EYE-RBT-SDT: 10 mg mild 4.

This material may adversely affect the male reproductive system (decreased sperm counts and degenerative changes in the testes) based on testing in laboratory animals. 3.

Kidney effects in male rats were observed in laboratory animals exposed to a similar material. Effects were consistent with male rats hyaline droplet nephropathy which is of questionable significance to human health. In animals, repeated exposure to high concentrations of a similar solvent has caused a decrease in the red blood cell count. 3.

Causes fetotoxicity in animals at doses which are maternally toxic. 3.

PROPANE

IHL-LC₅₀ >40% by volume 4.

N-BUTANE

IHL-RAT LC₅₀: 658 g/m³/4h 3.

IHL-MUS LC₅₀: 680 g/m³/4h 3.

Human volunteers exposed repeatedly to gases of similar hydrocarbon mixtures ranging from 250 to 1000 ppm exhibited no cardiac or pulmonary function abnormalities. 4.

No apparent ill effects in breathing concentrations of 5% for 2 hours. 4. Causes drowsiness in short time in concentrations of 1%. 4.

ACETONE

EYE-RBT SDT: 20 mg severe 4. SKN-RBT SDT: 500 mg/24h mild 4. SKN-GPG LD $_{50}$: >9400 uL/kg 4. ORL-RAT LD $_{50}$: 5800 mg/kg 4.

IHL-RAT LC₅₀: 50,100 mg/m³/8h 4.

ORL-RAT TD_{i o}: 273 g/kg/13w-c 4.

TOLUENE

EYE-RBT SDT: 870 ug mild 3.

SKN-RBT SDT: 20 mg/24h moderate 3.

 $\begin{array}{l} {\rm SKN\text{-}RBT\ LD}_{50}\text{: }8390\ {\rm mg/kg\ 6.} \\ {\rm ORL\text{-}HMN\ LD}_{L0}\text{: }50\ {\rm mg/kg\ 3.} \\ {\rm ORL\text{-}RAT\ LD}_{50}\text{: }636\ {\rm mg/kg\ 3.} \\ {\rm IHL\text{-}RAT\ LC}_{50}\text{: }12.5\ {\rm mg/L/4h\ 6.} \end{array}$

Animal studies have shown that repeated inhalation of high levels produced histological changes in the brain, degeneration of the heart tissue, cardiac sensitization and possible immune system suppression. Intentional abuse of toluene vapors has been linked to damage of the brain, kidney, and liver, 4.

Many case studies involving abuse during pregnancy indicate that toluene can cause birth defects, growth retardation and learning difficulties. 4.



Section VII - Reactivity Data

MATERIAL SAFETY DATA SHEET: CLEAR GUARD AFROSOL

Stability ———		Hazardous Polymeria	zation
[√] Stable	[] Unstable	[√] Will not occur	[] May occur
Conditions to Avoid: Avoid heat, hot surfaces, s	sparks, and open flames.	Conditions to Avoid: N/A	
		1	

Incompatibility (Materials to Avoid):

Strong oxidizing agents such as Chlorine bleach and concentrated Hydrogen Peroxide.

Hazardous Decomposition Products:

Oxides of Carbon.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:

Eliminate ignition sources of electrical, static, or frictional sparks. Ventilate the contaminated area and avoid creating dusty conditions. Wear appropriate protective clothing. Transfer solid using non-sparking equipment into a properly labeled container for re-use or disposal. If necessary, wash area with water. Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water.

Waste Disposal Method(s):

Dispose of in accordance with all Federal, state, and local regulations. Typical disposal is to wrap the empty aerosol container in several layers of newspaper and dispose of in the trash. Aerosol recycling programs are available in many areas. Do not puncture or incinerate this container.

Neutralizing Agent:

M/A

Section IX - Special Protection Information

Required Ventilation:

Local ventilation is recommended to control exposure from operations that can generate excessive levels of mists or vapors. Local ventilation is preferred, because it prevents dispersion into work areas by controlling it at its source.

Respiratory Protection:

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in publication No. 87-116 or ANSI Z88.2-1992.

Glove Protection:

Neoprene or nitrile rubber gloves should be worn. Ensure compliance with OSHA's personal protective equipment (PPE) standard for hand protection, 29 CFR 1910.138.

Safety glasses with side shields if the method of application presents the likelihood of eye contact. Ensure compliance with OSHA's Personal Protective Equipment (PPE) standard for eye and face protection, 29 CFR 1910.133.

Other Protection:

Wear protective clothing when handling. A safety shower and an eyewash station should be available. Remove soaked clothing and shoes. Wash clothing and clean shoes before re-use.

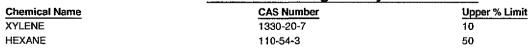
Section X - Storage and Handling Information Storage Conditions Storage Temperature Max: 120°F Min: 35°F [√] Indoors [] Outdoors []Heated [] Refrigerated Precautions to be Taken in Handling and Storing:

Use with caution around heat, sparks, pilot lights, static electricity, and open flame.

Other Precautions:

Keep out of reach of children. Read the entire label before using the product. Follow the label directions.

Section XI - Regulatory Information



Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act





MATERIAL SAFETY DATA SHEET: CLEAR GUARD AEROSOL

of 1986 and 40 CFR part 372.



Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

- 1. Threshold Limit Values for chemical substances and physical agents and biological exposure indices, ACGIH, 2007.
- 2. OSHA PEL
- 3. Vendor's MSDS.
- 4. Registry of toxic effects of chemical substances, CCINFOWeb, 2007.
- 5. European Chemical Substances Information System (ESIS), International Uniform Chemical Information Database (IUCLID) Chemical Data Sheets.
- 6. ChemADVISOR, Inc. Database Release: 2007-4.

All the components of this product are in compliance with the Toxic Substances Control Act (TSCA) and are either listed on the TSCA inventory or otherwise exempted from listing.

IRR: Irritant, OSHA: Occupational Safety & Health Administration, IARC: International Agency for the Research on Cancer, TOX: Toxic, NFPA: National Fire Protection Association, ppm: Parts Per Million, UEL: Upper Explosion Limit, STEL: Short-term Exposure Limit, HMN: Human, mg/m3, IHL: Inhalation, COMB: Combustible, CORR: Corrosive, MUT: Mutagenic, CARC: Carcinogenic, N/A: Not Applicable, TLV: Threshold Limit Value, N/E: Not Established, ORL: Oral, FLAM: Flammable, ASPHYX: Asphyxiant, C.O.C.: Cleveland Open Cup, PNOR: Particles Not Otherwise Regulated, LEL: Lower Explosion Limit, mg/L: Milligrams per Liter, PNOS: Particles Not Otherwise Specified, g/L: Grams per Liter, PMCC: Pensky-Martin Closed Cup, NTP: National Toxicology Program, µg/L: Micrograms per Liter, TCC: Tagliabue Closed Cup, SEV: Severe, RBT: Rabbit, INV: Intravenous, ACGIH: American Conference of Governmental Industrial Hygienists, PEL: Permissible Exposure Limit, MOD: Moderate, IPT: Intraperitoneal, gm/kg: Grams per Kilogram, C.C.C.: Cleveland Closed Cup, SKN: Skin, Milligrams per Cubic Meter, mg/kg: Milligrams per Kilogram, VOC: Volatile Organic Compound, SDT: Standard Draize Test, MSE: Mouse, GPG: Guinea Pig.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.



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issuing Date 06/05/2008

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name EUBREASE CLEAR Recommended Use Lubricant Information on Manufacturer

CHEMSEARCH DIV. OF NCH CORP.

Product Code 0930 **Chemical Nature Mixture Emergency Telephone Number** CHEMTREC ® 800-424-9300

BOX 152170 IRVING, TX 75015

2. HAZARDS IDENTIFICATION

Emergency Overview

Warning Combustible Liquid May be harmful if inhaled Causes skin imitation Causes eve imitation May be harmful if swallowed

Color Amber - Brown

Physical State Liquid

Odor Oily

Potential Health Effects

Principle Route of Exposure Primary Routes of Entry

Skin contact, Eye contact. Inhalation, Skin Absorption.

Acute Effects Eves

Skin

Causes eve irritation.

Inhalation

May cause skin irritation. May be absorbed through the skin in harmful amounts. May cause irritation of respiratory tract. Inhalation may cause central nervous system effects.

Ingestion

Harmful if swallowed. Causes headache, drowsiness or other effects to the central nervous system. Aspiration

hazard if swallowed - can enter lungs and cause damage.

Chronic Effects

Target Organ Effects

Liver, Kidney, Bladder, Central nervous system, Blood.

Aggravated Medical Conditions

Skin disorders. Respiratory disorders.

Chronic exposure may cause dermatitis.

Potential Environmental Effects

See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	
1,3,5-Trimethylbenzene	108-67-8	
Aliphatic hydrocarbon resin	152698-66-3	
Barium carbonate	513-77-9	
Petroleum distillates, hydrotreated light	64742-47-8	
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	64742-53-6	
Petroleum naphtha, light aromatic	64742-95-6	
Acids, lanolin	68424-43-1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Sulfurized hydrocarbon	68511-50-2	
Pseudocumene	95-63-6	
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	64742-52-5	

4. FIRST AID MEASURES

General Advice

Avoid contact with skin, eyes and clothing, Avoid breathing vapors, mist or gas.

Eye Contact Skin Contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Inhalation Ingestion

Drink 1 or 2 glasses of water. Do not induce vomiting. Get medical attention immediately. Never give anything by

mouth to an unconscious person.

Notes to Physician

Aspiration hazard if swallowed - can enter lungs and cause damage.

5. FIRE-FIGHTING MEASURES

Flash Point

119°F / 48°C

Method

Seta closed cup

Flammability Limits in Air Mixture

Autoignition Temperature No information available

Upper 8.9

Lower 0.01

Suitable Extinguishing Media

Foam, Alcohol-resistant foam, Carbon dioxide (CO2), Water spray, Dry powder,

Specific Hazards Arising from the Chemical

The product causes irritation of eyes, skin, and mucous membranes .

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA

Health

Flammability

Instability

HMIS

Health

Flammability

Instability

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition, Prevent further leakage or spillage if safe to do so.

Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) Methods for Containment

and transfer to a container for disposal according to local / national regulations (see section 13)

Pick up and transfer to properly labelled containers. Methods for Cleaning Up

7. HANDLING AND STORAGE

Handling

Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Avoid breathing vapors or mists. Keep away

from heat, sparks and open flame. - No smoking.

х

Storage Storage Temperature Keep containers tightly closed in a dry, cool and well-ventilated place 35°F / 2°C

Storage Conditions

Minimum Indoor

Outdoor

120°F / 49°C

Refrigerated Heated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
1,3,5-Trimethylbenzene	TWA: 25 ppm	no data available	TWA: 25 ppm
			TWA: 125 mg/m ³
Aliphatic hydrocarbon resin	No data available	no data available	no data available
Barium carbonate	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³
Petroleum distillates, hydrotreated light	No data available	no data available	no data available
Petroleum distillates, hydrotreated light naphthenic (<3% DMSC extractable)	No data available	no data available	no data available
Petroleum naphtha, light aromatic	No dala available	no data available	no data avaitable
Acids, lanolin	No dala available	no data avallable	no data available
Sulfurized hydrocarbon	No data available	no data available	no data available
Pseudocumene	TWA: 25 ppm	no data available	TWA: 125 mg/m ³ TWA: 25 ppm
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	No dala available	по data available	no data available

Engineering Measures Personal Protective Equipment Eye/Face Protection

Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Skin Protection

Impervious gloves.

Respiratory Protection

Use NiOSH approved respiratory protection.

Safety glasses with side-shields.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Color Appearance Liquid Amber - Brown Opaque

Viscosity Odor pΗ **Bulk Density** Non viscous Oily

Not applicable No data available

Specific Gravity Evaporation Rate VOC Content (%) No information available 0.9 24.6 (Butyl acetate=1)

Percent Volatile (Volume) Vapor Pressure

34 2.1 mmHg @ 70 °F

Vapor Density

30.9 5.2

Sclubility

Insoluble

Boiling Point/Range

345°F / 174°C

10. STABILITY AND REACTIVITY

Chemical Stability

Conditions to Avoid Incompatible Products **Hazardous Decomposition Products**

Possibility of Hazardous Reactions

Stable under normal conditions Heat, flames, and sparks

Strong oxidizing agents.

Carbon oxides. Nitrogen oxides (NOx). Sulfur oxides . Aldehydes . Ketones.

None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

No information available

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermai	LC50 Inhalation	Draize Test	Other
1,3,5-Trimethylbenzene	8970 mg/kg (Rat)	no data available	24 g/m³ (Rat) 4 h	no data available	no data available
Aliphatic hydrocarbon resin	no data available	no data available	no data available	no data available	no data available
Barium carbonate	418 mg/kg (Rat)	no data available	no data available	по data available	no data available
Petroleum distillates, hydrotreated light	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	5.2 mg/L (Rat)4 h	no data avaitable	no data available
etroleum distillates, hydrotreated light	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat) 4 h	no data available	no data available
naphthenic (<3% DMSO extractable)					
Petroleum naphtha, light aromatic	8400 mg/kg (Rat)	2000 mg/kg (Rabbit)	3400 ppm (Rat) 4 h	no data available	no data available
_			5.2 mg/L (Rat)4h		1





				L	
Acids, lenolin	5000 mg/kg (Rat)	no data available	no data available	no data available	no data available
Sulfurized hydrocarbon	5000 mg/kg (Rat)	no data available	no data available	no data svailable	no data available
Pseudocumene	3400 mg/kg (Rat)	3160 mg/kg (Rabbit)	18 g/m ³ (Rat) 4 h	no data available	по data available
Petroleum distiliates, hydrotreated	5000 mg/kg (Rat)	2000 mg/kg (Rabbit)	2.18 mg/L (Rat)4 h	no data available	no data available
heavy naphthenic (<3% DMSO		1	1		}
extractable)		1	1		ł

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
1,3,5-Trimethylbenzene	no data avallable	no data available	no data available	no data available	eyes, skin, respiratory system, CNS, blood
Aliphatic hydrocarbon resin	no data available	no data available	no data available	no data available	no data avallable
Barium carbonate	no data available	no data available	no data available	no data available	no data available
Petroleum distillates, hydrotreated light	no data available	no data available	no data available	no data available	ne data available
Petroleum distillates, frydrotreated light naphthenic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	no data available
Petroleum naphtha, light aromatic	no data available	no data available	no data available	no data available	no data available
Acids, lanolin	no data available	no data available	no data available	no data available	no data available
Sulfurized hydrocarbon	no data available	no data available	no data available	no data available	no data available
Pseudocumene	no data available	no data available	no data available	no data available	eyes, skin, respiratory system, CNS, blood
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	no data available

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
1,3,5-Trimethylbenzene	not applicable				
Aliphatic hydrocarbon resin	not applicable				
Barium carbonate	not applicable				
Petroleum distillates, hydrotreated light	not applicable				
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	not applicable				
Petroleum naphtha, light aromatic	not applicable				
Acids, lanolin	not applicable				
Sulfurized hydrocarbon	not applicable				
Pseudocumene	not applicable				
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	not applicable	not applicable	not applicable	net applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information

No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
1,3,5-Trimethylberszene	no data available	LC50= 3.48 mg/L Pimephales promelas 96 h	no data available	EC50 = 50 mg/L 24 h	N/A
Aliphatic hydrocarbon resin	no data available	no data available	no data available	no data available	N/A
Barium carbonate	no data available	LC50= 238 mg/L Gambusia affinis 96 h	no data available	no data avaitable	N/A
Petroleum distillates, hydrotreated light	no data available	LC50= 1740 mg/L Lepomis macrochlrus 96 h LC50= 45 mg/L Pimephales promelas 96 h	no data available	LC50 = 4720 mg/L 96 h	N/A
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	no data available	LC50> 5000 mg/L Pimephales promelas 96 h	no data available	EC50 > 1000 mg/L 48 h	N/A
Petroleum naphtha, light aromatic	no data available	LC50= 9.22 mg/L Oncorhynchus mykiss 96 h	no data available	EC50 = 6.14 mg/L 48 h	N/A
Acids, fanolin	no data available	no data available	no data available	no data available	N/A
Suffurized hydrocarbon	no data available	LC50 250 - 500 mg/L Pimephales promelas 96 h	no data available	EC50 > 1000 mg/L 48 h	N/A
Pseudocumene	no data available	LC50= 7.72 mg/L Pimephales promelas 96 h	no data available	EC50 = 6.14 mg/L 48 h	3,63
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	LC50> 5000 mg/L Pimephales prometas 96 h	no data available	EC50 > 1000 mg/t, 48 h	N/A

Persistence and Degradability

Bioaccumulation

No information available No information available

Mobility No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal Container Disposal Dispose of as hazardous waste in compliance with local and national regulations

Do not re-use empty containers



DOT

Proper Shipping Name Hazard Class

Petroleum distillates, n.o.s.



UN-No

Packing Group

UN1268

Description

Petroleum distillates, n.o.s.,3,UN1268,PG III; Less Than 119gal NOT REGULATED

TDG

Proper shipping name

Hazard Class

UN-No

UN1268

Packing Group Description

Petroleum Distillates, n.o.s.,3,UN1268,PG III

ICAO

UN-No

UN1268

Proper Shipping Name Hazard Class

Packing Group

Petroleum distillates, n.o.s.

Petroleum distillates, n.o.s.

Shipping Description

Petroleum Distillates, n.o.s.,3,UN1268,PG III

IATA

UN-No

UN1268

Proper Shipping Name

Petroleum distillates, n.o.s.

Hazard Class Packing Group 3

ERG Code Shipping Description

UN1268,Petroleum Distillates, n.o.s.,3,PG III

IMDG/IMQ

Proper Shipping Name

Petroleum distillates, n.o.s.

Hazard Class UN-No

UN1268

Packing Group EmS No.

F-E, S-E

Shipping Description

UN1268, Petroleum distillates, n.o.s.,3,PG III

15. REGULATORY INFORMATION

Inventories

TSCA

Does not Comply Does not Comply

DSL U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Barium carbonate	513-77-9	0.1-1	1.0
Pseudocumene	95-63-6	5-10	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure	Reactive Hazard
			Hazard	
Yes	No	Yes	No	No No

Component	Hazardous Substances RQs	CERCLA EHS RQs
1,3,5-Trimethylbenzene	Not applicable	Not applicable
Aliphatic hydrocarbon resin	Not applicable	Not applicable
Barium carbonate	Not applicable	Not applicable
Petroleum distillates, hydrotreated light	Not applicable	Not applicable
Petroleum distillates, hydrotreated light naphthenic (<3% DMSO extractable)	Not applicable	Not applicable
Petroleum naphtha, light aromatic	Not applicable	Not applicable
Acids, lanolin	Not applicable	Not applicable
Sulfurized hydrocarbon	Not applicable	Not applicable
Pseudocumene	Not applicable	Not applicable
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	Not applicable	Not applicable

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class



B3 Combustible liquid, D2B Toxic materials

16. OTHER INFORMATION

Prepared By Supercedes Date Issuing Date Dan Hollas 06/23/2004 06/05/2008

Reason for Revision

No information available No information available

Glossary List of References

No information available

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.



Issuing Date 09/16/2008

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name DUO POWER
Recommended Use cleaning agent
Information on Manufacturer
CHEMSEARCH DIV. OF NCH CORP.

Product Code 0095 Chemical Nature Mixture Emergency Telephone Number CHEMTREC ® 800-424-9300

BOX 152170 IRVING, TX 75015

2. HAZARDS IDENTIFICATION

Emergency Overview

Warning
Severe skin irritation
Severe eye irritation
Irritating to respiratory system
Harmful if swallowed

Color Green

Physical State Liquid

Odor None

Potential Health Effects
Principle Route of Exposure

Principle Route of Exposure Primary Routes of Entry Skin contact, Eye contact. None known.

Acute Effects

Eyes Skin Severe eye irritant. Severe skin irritant.

Inhalation

Causes respiratory tract irritation. Irritating to mucous membranes.

Ingestion Chronic Effects

None known.

Target Organ Effects

Skin, Eyes, Respiratory system.

Aggravated Medical Conditions Potential Environmental Effects Skin disorders. Respiratory disorders. See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No CAS-No
Sodium xylene sulfonate	1300-72-7
Sodium hydroxide	1310-73-2
Sodium tripolyphosphate	7758-29-4
Sodium dodecylbenzenesulfonate	25155-30-0

4. FIRST AID MEASURES

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . Get medical attention

immediately

Skin Contact

Remove/Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15

minutes. Get medical attention immediately. Wash contaminated clothing before re-use.

Inhalation

If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion

Drink 1 or 2 glasses of water. Do not induce vomiting. Get medical attention immediately. Never give anything by

mouth to an unconscious person.

Notes to Physician

No information available.

5. FIRE-FIGHTING MEASURES

Flash Point

Not combustible

Method

1

Not applicable

Autoignition Temperature No information available Flammability Limits in Air Not applicable

riammabunty Limits in Air Not applica Deliante Celle establis Media

Suitable Extinguishing Media

Foam. Carbon dioxide (CO2). Dry chemical. Water spray.

Specific Hazards Arising from the Chemical

Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Health 2

Flammability

Instability

0

NFPA HMIS

Health

2

Flammability

1 Instability

0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Environmental Precautions

Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for Containment

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite)

and transfer to a container for disposal according to local / national regulations (see section 13)

Methods for Cleaning Up

Pick up and transfer to properly labelled containers.

Neutralizing Agent

Neutralize with hydrochloric acid

7. HANDLING AND STORAGE

Handling

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mists.

Storage

Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-

ventilated place.

Storage Temperature Storage Conditions

Minimum

Indoor

Outdoor Χ Maximum Heated

120°F / 49°C Refrigerated

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium xylene sulfonate	No data available	no data available	no data available
Sodium hydroxide	Celling: 2 mg/m ³	TWA: 2 mg/m ³	IDLH: 10 mg/m ³
			Ceiling: 2 mg/m ³
Sodium tripolyphosphate	No data available	no data available	no data available
Sodium dodecytbenzenesulfonate	No data avallable	no data available	no data available

Engineering Measures

Personal Protective Equipment

Eye/Face Protection

General Hygiene Considerations

Skin Protection Respiratory Protection Goggles.

Impervious gloves. Impervious clothing. Use NIOSH approved respiratory protection.

Use with local exhaust ventilation.

35°F / 2°C

Ensure that eyewash stations and safety showers are close to the workstation location. Wear protective

gloves/clothing. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Color Appearance

Liquid Green Transparent

Viscosity Odor pΗ

Non viscous None 12.4 No data available

Specific Gravity Evaporation Rate

0.45 (Butyl acetate=1)

Bulk Density Percent Volatile (Volume)

76.5

VOC Content (%) 0

Vapor Density 0.6 **Boiling Point/Range**

Vapor Pressure Solubility

15.5 mmHg @ 70 °F Soluble

210°F / 99°C

10. STABILITY AND REACTIVITY

Chemical Stability Conditions to Avoid Incompatible Products

Hazardous Decomposition Products Possibility of Hazardous Reactions

Stable under normal conditions. Heat, flames, and sparks. Strong oxidizing agents. Acids.

Carbon oxides. Sulfur oxides. Oxides of phosphorus. Phosphorus compounds.

Hydrogen sulfide and smoke.. Sodium oxides.

None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

No information available

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Sodium xylene sulfonate	7200 mg/kg (Rat)	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	1350 mg/kg (Rabbit)	no data available	по data available	no data available
Sodium tripolyphosphate	3100 mg/kg (Rat)	7940 mg/kg (Rabbit)	no data available	no data availabie	no data available
Sodium dodecylbenzenesutfonate	438 mg/kg (Flat)	ne data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium xylene sulfonate	no data available	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	no data available	no data available	no data available	eyes, skin, respiratory system
Sodium tripolyphosphate	no data available	no data available	no data available	no data available	no data available
Sodium dodecylbenzenesulfonate	no data available	no data available	no data available	no data available	no data available

Carcinogenicity

There are no known carcinogenic chemicals in this product

	Component	ACGIH	IARC	NTP	OSHA	Other
	Sodium xylene sutfonate	not applicable				
	Sodium hydroxide	not applicable	not applicable	not applicable	net applicable	not applicable
7	Sodium tripolyphosphate	not applicable				
	Sedium dodecylbenzenesulfonate	not applicable				

12. ECOLOGICAL INFORMATION

Product Information

No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Sodium xylene sulfonate	no data available	no data available	no data available	no data available	N/A
Sodium hydroxide	no data available	LC50= 45.4 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A
Sodium tripolyphosphate	no data available	LC50= 1650 mg/L Leuciscus idus 48 h	no data available	no data available	N/A
Sodium dodecyibenzenesulfonate	no data avaitable	LC50= 10.8 mg/L Oncorhynchus mykiss 96	no data available	no data available	N/A
		h l		1	1

Persistence and Degradability

Bioaccumulation

No information available No information available

Mobility

No information available

Product Disposal Container Disposal Dispose of in accordance with local regulations

Do not re-use empty containers

14. TRANSPORT INFORMATION

13 DISPOSAL CONSIDERATIONS

מחת

Not regulated

TDG

Not regulated

ICAO

Not regulated

Not regulated

IMDG/IMO

Not regulated

15. REGULATORY INFORMATION



TSCA

Complies Complies

DSL U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization Acute Health Hazard

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure	Reactive Hazard
			Hazard	
Yes	No	No	No	No
CERCLA				
Comp	onent	Hazardous Substan	ices RQs	CERCLA EHS ROS

Component	Hazardous Substances RQs	CERCLA EHS ROS
Sodium xylene sulfonate	Not applicable	Not applicable
Sodium hydroxide	1000 lb	Not applicable
Sodium tripolyphosphate	5000 lb	Not applicable
Sodium dodecylbenzenesulfonate	1000 lb	Not applicable

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2B Toxic materials.



16. OTHER INFORMATION

Prepared By Supercedes Date Issuing Date

Dan Hollas 01/23/2006 09/16/2008

Reason for Revision Glossary

No information available No information available

List of References

No information available

CHEMSEARCH DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated wiht such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.







Section I - General Information

(000000-000000- -0616)

Date of Issue:

11/21/2005 12:00:00 AM

Chemical Name & Synonyms:

Chemical Family:

ORANGE TERPENE/FATTY AMIDE/ALKENE BLEND

Manufacturer Name:

CHEMSEARCH DIV. OF NCH CORP.

Manufacturer Address:

BOX 152170

IRVING, TX 75015

Prepared By:

M McDowell/Chemist

Product Code Number:

0616

MAR I 9 2009

5/20/2002 12:00:00 AM

Trade Name & Synonyms:

CITRUS FULLBACK

Formula is a mixture: [√]

Emergency Phone Number:

800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients) TLV PEL CAS# Hazard STEL **D-LIMONENE** COMB/IRR N/E 1 5 MG/M3 \$2 N/E 5989-27-5 1-TETRADECENE IRRITANT 5 MG/M3 #1 5 MG/M3 #2 10 MG/M3#1 1120-36-1 1-DODECENE IRRITANT 5 MG/M3 #1 5 MG/M3 #2 10 MG/M3#1 112-41-4 1-OCTADECENE 10 MG/M3#1 112-88-9 **IRRITANT** 5 MG/M3 #1 5 MG/M3 #2 1-HEXADECENE **IRRITANT** 5 MG/M3 #1 5 MG/M3 #2 10 MG/M3#1 629-73-2 TALL OIL FATTY AMIDE, N,N-BIS(HYDROXYETHYL) COMB/IRR N/E 1 N/E 2 N/E 68155-20-4

\$ VEGETABLE OIL MIST VALUE

#OIL MIST VALUES

Section III - Physical Data

Boiling Point (°F): 435°

Vapor Pressure (mm Hg): 0.69

Vapor Density (Air=1): 4.8

pH @ 190%: 8.5@10%

% Volatile by Volume: 92

H₂0 Solubility: EMULSIFIABLE

Specific Gravity (H₂0=1): 0.803

Color: STRAW - AMBER

Odor: CITRUS

Clarity: TRANSPARENT

Evaporation Rate (BuAc=1): 0.04

Viscosity: NON-VISCOUS

Section IV - Fire and Explosion Hazard

Flash Point: 159°F

Flammable Limits: PRODUCT MIXTURE

LEL: 0.3%

Method Used: T.C.C.

UEL: 6.1%

Aerosol Level (NFPA 30B): N/A

- Extinguishing Media:

[√] Foam [v] Dry Chemical [] Alcohol Foam [v] Water Spray

[√] CO2 []Other

NFPA 704 Hazard Rating:

4-Extreme 3-High

Health: 2 Flammability: 2

2-Moderate 1-Slight

Instability: 0

0-Insignificant

Special:

Special Fire Fighting Procedures:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED

CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.



VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT AND/OR LOW-LYING SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. THE USE OF WATER SPRAY (F0G) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. USE CARE AS SPILLS MAY BE SLIPPERY.

Section V - Health and Hazard Data

Threshold Limit Value:

5 MG/M3 AS OIL MIST 1.

Effects of Overexposure:

Acute: (Short Term Exposure)

EYE CONTACT: CAUSES IRRITATION SEEN AS STINGING, TEARING, AND REDNESS. SKIN CONTACT: CAUSES IRRITATION SEEN AS ITCHING AND REDNESS. MAY CAUSE ALLERGIC SKIN REACTION SEEN AS DELAYED SKIN RASH WHICH MAY BE FOLLOWED BY BLISTERING, SCALING, AND OTHER SKIN EFFECTS. PROLONGED OR REPEATED CONTACT AS FROM CLOTHING WET WITH MATERIAL MAY CAUSE DRYING, DEFATTING, AND CRACKING OF THE SKIN. INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. MAY CAUSE ALLERGIC RESPIRATORY REACTION. AT LOW VAPOR CONCENTRATIONS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS, DROWSINESS, WEAKNESS, UNCONCIOUSNESS, POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION, AND MAY BE FATAL. INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING, AND DIARRHEA. INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL.

Chronic: (Long Term Exposure)

MAY CAUSE SKIN AND RESPIRATORY SENSITIZATION. ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO HYDROCARBON MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL ACNE. IN RARER CASES, AN INCREASED SENSTIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS; PRE-EXISTING LIVER AND KIDNEY DISEASES. TARGET ORGANS: CENTRAL NERVOUS SYSTEM, BLOOD-FORMING ORGANS, LIVER, KIDNEYS, AND LUNGS. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Validation and the state of the
on [√] Absorption

Emergency First Aid Procedures:

Inhalation

REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

Eve Contact

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

Skin Contact

WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS, WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

Ingestion

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

Notes to Physician:

INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. DEPENDING ON THE AMOUNT INGESTED AND RETAINED AS WELL AS THE TOXICITY OF THE PRODUCT, GASTRIC LAVAGE SHOULD BE CONSIDERED. KEEP PATIENT'S HEAD BELOW HIPS TO PREVENT PULMONARY ASPIRATION. IF COMATOSE, A CUFFED ENDOTRACHAEL TUBE WILL PREVENT ASPIRATION.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:						
[]IARC	[]NTP	[]OSHA	[] ACGIH	[] Other		

VOC CONTENT OF UNDILUTED PRODUCT: 20% BY WEIGHT, 19.1% BY VOLUME, 160.6 G/L VOC CONTENT AT USE DILUTION: 5%





D-LIMONENE

ORL-RAT LD50: 4400 MG/KG 3.

SKN-RBT LD50: >5 G/KG 4.

SKN-RBT: SEVERELY IRRITATING 4. EYE-RBT: SEVERELY IRRITATING 4.

HYDROCARBON MISTS DERIVED FROM HIGHLY REFINED OILS ARE REPORTED TO HAVE LOW ACUTE AND SUB-ACUTE TOXICITIES IN ANIMALS. EFFECTS FROM SINGLE AND SHORT-TERM REPEATED EXPOSURES TO HIGH CONCENTRATIONS OF MINERAL OIL MISTS WELL ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS INCLUDE LUNG INFLAMMATORY REACTION, LIPOID GRANULOMA FORMATION. AND LIPOID PNEUMONIA. 4.

1-TETRADECENE NO TOXICITY DATA AVAILABLE

1-DODECENE NO TOXICITY DATA AVAILABLE

1-OCTADECENE
NO TOXICITY DATA AVAILABLE

1-HEXADECENE ORL-RAT LD50: >10 G/KG 3. IHL-RAT LC50: >8500 MG/M3/1H 3. SKN-RBT LD50: 10 G/KG 3.

TALL OIL FATTY AMIDE, N,N-BIS(HYDROXYETHYL) NO TOXICITY DATA AVAILABLE

Section VII - Reactivity Data

Stability		┌ Hazardous Polymerization]
[√] Stable	[] Unstable	[√] Will not occur	[] May occur
Conditions to Avoid:	CES, SPARKS, AND OPEN FLAMES.	Conditions to Avoid: N/A	
AVOID HEAT, NOT SON A	CES, SPAINS, AND OF ENTEAMES.	N/A	

Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; ACIDS, CLAYS, ALUMINUM CHLORIDE, HALOGENS, IODINE PENTAFLUORIDE, VINYL CHLORIDE, PLASTICS, AND RUBBER.

Hazardous Decomposition Products:

OXIDES OF CARBON AND NITROGEN.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:

WEAR APPROPRIATE PROTECTIVE CLOTHING. ELIMINATE ALL SOURCES OF IGNITION AND VENTILATE THE AREA. USE ONLY NON-SPARKING EQUIPMENT. USE CARE AS SPILLS MAY BE SLIPPERY. SHUT OFF SOURCE OF LEAK, DIKE AND CONTAIN SPILL. ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.

Waste Disposal Method(s):

DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

Neutralizing Agent:

N/A

Section IX - Special Protection Information

Required Ventilation:

LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS OR VAPORS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.



RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED.



FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:

NEOPRENE OR NITRILE RUBBER GLOVES SHOULD BE WORN, ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910,138.

Eve Protection:

SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF APPLICATION PRESENTS THE LIKELIHOOD OF EYE CONTACT. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:

WEAR PROTECTIVE CLOTHING WHEN HANDLING. REMOVE SOAKED CLOTHING AND SHOES. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

Section X - Storage and Handling Information

- Storage Temper	rature	Storage Conditi	Storage Conditions —					
Max: 120°F	Min: 32°F	[√] Indoors	[] Outdoors	[] Heated	[]Refrigerated			
				MAALAAAA				

Precautions to be Taken in Handling and Storing:

ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP THE CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY, AND OPEN FLAME. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUES WHICH MAY EXHIBIT THE HAZARDS OF THE PRODUCT. TO AVOID POSSIBLE EXPLOSION DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND, OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS, OR OPEN FLAMES. GROUND AND BOND CONTAINER WHEN HANDLING NEAR FLAMMABLE VAPORS AND ALL SOURCES OF IGNITION.

Other Precautions:

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT, FOLLOW THE LABEL DIRECTIONS.

Section XI - Regulatory Information

Chemical Name None. CAS Number

Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California

Section XII - References

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2005.
2. OSHA PEL. 3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2005. 4. VENDOR'S MSDS. ALL THE
COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED
ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING. - IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE,
CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP,
PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, LIBL:LUPPER EXPLOSION LIMIT,
NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL
TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF
GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM
EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICLES (INSOLUBLE) NOT
OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL:INHALATION, HMN:HUMAN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CHEMSEARCH DIV. OF NCH CORP, assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

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COASTWIDE LABORATORIES

Formerly Paulsen & Roles Laboratories

10000 S.W. Commerce Circle Wilsonville, OR 97070

Office PHONE: 503-416-5300 or FAX 503-416-5301

24-HR EMERGENCIES: MEDICAL 800-808-4691

Hazard Rating **HMIS NFPA** 214109 Health 1 1 **Flammability** 0 O 0 Reactivity Ð

Special

DOT CHEMTREC: 800-424-9300

None

MATERIAL SAFETY DATA SHEET

Complies with ANSI Z400.1 Format

SECTION 1: PRODUCT IDENTIFICATION

Product:

64 to 1[™]

MSDS CODE: CL3000.0201

GENERIC DESCRIPTION

DATE ISSUED

SUPERSEDES

PREPARED BY

None

Concentrated Glass Cleaner

2-1-01 7-1-00 Roger McFadden, Chemist

Environmentally Responsible Product

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Components*	% by Wt.	CAS#	Exposure Limit
Alkyl polyglycoside surfactant	10-20	110615-47-9	TLV not established
Isopropanol	01-02	67-63-0	400 ppm (PEL & TLV/TWA)
Food Blue #2 Dye	<0.1	3 844-4 5-9	TLV not established

Balance is water and similar non-hazardous ingredients.

NA = Not applicable NSR = No Special Requirements NID = Not Determined PEL = OSHA TLV-TWA = ACGIH

SECTION 3: HAZARD IDENTIFICATION

Primary Entry Routes: Skin and eyes. Signs & Symptoms of Exposure: Direct contact of product with eyes or skin may cause irritation. Prolonged or repeated contact of product with skin and eye may cause redness. If taken internally, product may cause irritation to mouth, throat or stomach. Effects of Overexposure: None known.

SECTION 4: FIRST AID MEASURES

Emergency First Aid Procedures: Wash skin with plenty of water. If irritation persists, seek medical aid. If eye contact occurs, flush eyes with water for 15-20 minutes, then get prompt medical aid. If product is swallowed, drink large amounts of water or milk and seek medical aid.

24-HR MEDICAL EMERGENCY PHONE: 800-808-4691

SECTION 5: FIRE FIGHTING MEASURES

Extinguishing Media: Foam. CO2. Dry Chemical. Water Fog. Flash Point: NONE Flammable Limits: ND Special Fire Fighting Procedures: Normal fire fighting procedures may be used.

Unusual Fire and Explosion Hazards: No special hazards known. Use water spray to cool nearby containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Release or Spill: Absorb with diatomaceous earth or similar inert material. Sweep or scrape up and containerize. Rinse affected area thoroughly with water. Wear or use appropriate protective equipment. All Federal, State and Local regulations should be carefully followed.

SECTION 7: HANDLING AND STORAGE

Keep out of reach of children. Store in a cool, dry place with adequate ventilation. Keep from freezing. Wash thoroughly after handling. Empty container may contain small amounts of undiluted product. Be certain to dispose of according to all regulations.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection: No special requirements under normal use conditions. Maintain adequate ventilation. Protective Gloves: No special requirements for normal use conditions.

Eye Protection: No special requirements for normal use conditions. However, it is a good safe practice to wear eve protection when using any chemical product.

Other Protective Measures: Use good personal hygiene practices. Launder contaminated clothing/equipment before reuse.

^{*}There are no components in this product that are currently reportable in either SARA Title III: Sections 313, 40 CFR part 372 or the California Proposition 65 requirements.



Appearance/Odor: Dark Blue liquid/Alcohol Boiling Point: 212F Evap. Rate: NA pH: 8-9

Vapor Density: ND Vapor Pressure: NA Specific Gravity: 1.00 Solubility in Water: Complete %Volatile: 100

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable Conditions to Avoid: None known to COASTWIDE Incompatibility: None known to COASTWIDE Hazardous Decomposition Products: None known to COASTWIDE.

Hazardous Polymerization: Will not occur. Conditions to Avoid: None known to COASTWIDE.

SECTION 11: TOXICOLOGICAL INFORMATION

Oral Toxicity: Based upon information provided by Henkel Corporation for the alkyl polyglycoside surfactant this product exhibits acute oral LD50 values greater than 5.0 g/Kg for rats and acute dermal LD50 values greater than 2.0 g/Kg for rabbits. This product is non-toxic based upon current information available to COASTWIDE. This product contains none of the persistent, bioaccumulative and toxic chemicals (PBT) as listed by EPA: dioxins & furans, toxaphene, PCBs, Mirex, Mercury & compounds, Octachlorostyrene, alkyl-lead, DDT, Hexachlorobenzene, aldrin/dieldrin, benzo(a)pyrene and chlordane. Contains no 2-butoxyethanol (butyl). AQUATIC TOXICITY: All ingredients used to make this product are not toxic to aquatic life as measured by test methods found in 40CFR Part 797, Subpart B; and based upon information supplied by Henkel Corporation for the alkyl polyglycoside surfactant this product meets the criteria of >1000 mg/L for Acute Exposure EC20 Daphnia (48hrs), EC20 fish (96 hrs), EC20 algea (96 hrs) and Chronic Exposure EC20 Daphnia

SECTION 12: ECOLOGICAL INFORMATION

Modified OECD screening tests indicate that alkyl polyglycoside surfactants exceed the 70% dissolved oxygen content requirement for classification as readily biodegradable. After this product's use, it will biodegrade in sewage systems and/or the environment. Contains no phosphates. Contains no alkyphenol ethoxylates (APE). No ingredients used to make this product are listed in the toxic release inventory (TRI) chemicals list under Superfund Amendments and Reauthorization Act (SARA) Title III, Section 313. This product contains no ozone-depleting chlorinated compounds as specified by the Montreal Protocol. This product contains no paradichlorobenzene 1,4-dioxane, sodium hypochlorite, NTA or sodium EDTA. This product contains volatile organic compounds (VOC) in a concentration of less than 5% of the weight of the product.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Information: Waste Disposal Information: No special method. Observe all applicable Federal, State and Local regulations, rules and/or ordinances regarding disposal of non-hazardous materials. This product is not considered a hazardous waste in Oregon or Washington as defined in WAC 173-303-070 or as characterized in WAC 173-303-090. Observe all applicable Federal, State and Local regulations, rules and/or ordinances regarding disposal of non-hazardous materials.

SECTION 14: TRANSPORT INFORMATION

DOT EMERGENCY 24-HR: (800) 424-9300 DOT Class: Not Regulated

SECTION 15: REGULATORY INFORMATION

SARA Title III Section 313 and 40 CFR Part 372 Notification: See section 2.

No ingredients in this product are currently listed as carcinogens, mutagens and teratogens by NTP, IARC or OSHA. All components of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SECTION 16: OTHER INFORMATION

Always follow label directions carefully when using this or any other chemical product. If information about this product is required, please contact COASTWIDE Laboratories at 503-416-5300. Keep MSDSs filed and organized in an area accessible to workers according to the Hazard Communication Standards.

All information appearing herein is given in good faith. No warranty is made, expressed or implied including merchantability or fitness for a particular purpose. All conditions of use are beyond the control of COASTWIDE Laboratories. Therefore, users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes. The data contained herein is confidential and intended solely for the user's internal use.



Status: Final

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Date of Issue: 17-Mar-2006



MATERIAL SAFETY DATA SHEET

Conoco Ecoterra Hydraulic Fluid HVI 46/68

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:

Conoco Ecoterra Hydraulic Fluid HVI 46/68

Synonyms:

Conoco Ecoterra Hydraulic Fluid HVI 46 Conoco Ecoterra Hydraulic Fluid HVI 68

Intended Use:

Hydraulic Oil

Responsible Party:

ConocoPhillips Lubricants

600 N. Dairy Ashford

Houston, Texas 77079-1175

Customer Service: Technical Information: 800-640-1956 800-255-9556

mation: 800

Emergency Overview

MAR I 9 2009

ENTERED

24 Hour Emergency Telephone Numbers:

Spill, Leak, Fire or Accident Call CHEMTREC:

North America: (800) 424-9300 Others: (703) 527-3887 (collect)

California Poison Control System: (800) 356-3219

Health Hazards/Precautionary Measures: Causes eye irritation. A component may cause an allergic skin reaction. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance:

Clear and bright

Physical Form:

Liquid

Odor:

Characteristic petroleum

NFPA 704 Hazard Class:

Health:

2 (Moderate)

Flammability:

1 (Slight)

Instability:

0 (Least)

2. COMPOSITION / INFORMATION ON INGREDIENTS

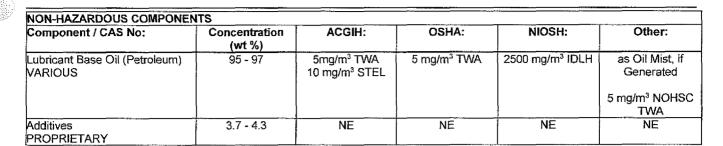
HAZARDOUS COMPONENTS					
Component / CAS No:	Concentration (wt %)	ACGIH:	OSHA:	NIOSH:	Other:
2-Propenoic acid, 2-Methyl- Dodecyl ester, polymer with Methyl 2-Methyl-2-Propenoate 30795-64-3	2.5 - 4	NE	NE	NE	NE



Status: Final

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Date of Issue: 17-Mar-2006



Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM. NE=Not Established

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye: Eye irritant. Contact may cause stinging, watering, redness, and swelling.

Skin: Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.



Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the digestive tract, nausea, diarrhea. Inhalation of oil mist or vapors at elevated temperatures may cause respiratory irritation.

Cancer: There is inadequate information to evaluate the cancer hazard of this material. See Section 11 for information on the individual components, if any.

Target Organs: No data available for this material.

Developmental: No data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders, eye disorders.

4. FIRST AID MEASURES

Eye: Move victim away from exposure and into fresh air. If irritation or redness develops, flush eyes with clean water and seek medical attention. For direct contact, hold eyelids apart and flush the affected eye(s) with clean water for at least 15 minutes. Seek medical attention.

Skin: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.



Status: Final

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Date of Issue: 17-Mar-2006



Notes to Physician: High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

5. FIRE-FIGHTING MEASURES

Flammable Properties:

Flash Point:

> 383°F/195°C

Test Method:

Cleveland Open Cup (COC), ASTM D92

OSHA Flammability Class:

Not applicable

LEL%:

No data No data

UEL%: Autoignition Temperature:

No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire. Vapors are heavier than air and can accumulate in low areas.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

Status: Final

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7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required.



Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact and possible irritation (see manufacturers literature for information on permeability).

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).



Appearance: Physical Form: Odor: Clear and bright Liquid Characteristic petroleum

Status: Final

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9. PHYSICAL AND CHEMICAL PROPERTIES

Odor Threshold:

No data

Not applicable

Vapor Pressure (mm Hg):

<1

Vapor Density (air=1):

>1

Boiling Point:

No data

Melting/Freezing Point:

< -37°F / -38°C

Pour Point:

< -37°F / -38°C

Solubility in Water: Partition Coefficient (n-octanol/water) (Kow): Insoluble

Specific Gravity:

No data 0.87

Bulk Density:

7.3 lbs/gal

Viscosity cSt @ 100°C:

7.5 - 10.4

Viscosity cSt @ 40°C:

42 - 72

Evaporation Rate (nBuAc=1): Flash Point:

No data

Test Method:

> 383°F/195°C

LEL%:

Cleveland Open Cup (COC), ASTM D92 No data

UEL%:

No data

No data

Autoignition Temperature: **Decomposition Temperature:**

No data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents, strong acids, strong bases.

Hazardous Decomposition Products: Combustion can yield carbon, nitrogen and sulfur oxides.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Chronic Data:

Lubricant Base Oil (Petroleum) (VARIOUS)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating, and/or dewaxing to remove aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and are not considered carcinogens by NTP, IARC, or OSHA.

Acute Data:

Lubricant Base Oil (Petroleum) (VARIOUS)

Dermal LD50= >2 g/kg

Inhalation LC50= No information available

Oral LD50= >5 g/kg

Status: Final

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12. ECOLOGICAL INFORMATION

Lubricant oil basestocks are complex mixtures of hydrocarbons (primarily branched chain alkanes and cycloalkanes) ranging in carbon number from C15 to C50. The aromatic hydrocarbon content of these mixtures varies with the severity of the refining process. White oils have negligible levels of aromatic hydrocarbons, whereas significant proportions are found in unrefined basestocks. Olefins are found only at very low concentrations. Volatilization is not significant after release of lubricating oil basestocks to the environment due to the very low vapor pressure of the hydrocarbon constituents. In water, lubricating oil basestocks will float and will spread at a rate that is viscosity dependent. Water solubilities are very low and dispersion occurs mainly from water movement with adsorption by sediment being the major fate process. In soil, lubricating oil basestocks show little mobility and adsorption is the predominant physical process.

Both acute and chronic ecotoxicity studies have been conducted on lubricant base oils. Results indicate that the acute aquatic toxicities to fish, Daphnia, Ceriodaphnia and algal species are above 1000 mg/l using either water accommodated fractions or oil in water dispersions. Since lubricant base oils mainly contain hydrocarbons having carbon numbers in the range C15 to C50, it is predicted that acute toxicity would not be observed with these substances due to low water solubility. Results from chronic toxicity tests show that the no observed effect level (NOEL) usually exceeds 1000 mg/l for lubricant base oils with the overall weight of experimental evidence leading to the conclusion that lubricant base oils do not cause chronic toxicity to fish and invertebrates.

Large volumes spills of lubricant base oils into water will produce a layer of undissolved oil on the water surface that will cause direct physical fouling of organisms and may interfere with surface air exchange resulting in lower levels of dissolved oxygen. Petroleum products have also been associated with causing taint in fish even when the latter are caught in lightly contaminated environments. Highly refined base oils sprayed onto the surface of eggs will result in a failure to hatch.

Extensive experience from laboratory and field trials in a wide range of crops has confirmed that little or no damage is produced as a result of either aerosol exposure or direct application of oil emulsion to the leaves of crop plants. Base oils incorporated into soil have resulted in little or no adverse effects on seed germination and plant growth at contamination rates up to 4%.

13. DISPOSAL CONSIDERATIONS



This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

Contents should be completely used and containers emptied prior to discard. Rinsate may be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or a drum reconditioner. To assure proper disposal of small empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORTATION INFORMATION

DOT

Note: Material is unregulated unless shipped by land in a packaging having a capacity of 3500 gallons or more. Then the provisions of 49 CFR, Part 130 apply.

IMDG

Shipping Description: Not regulated

ICAO/IATA

Shipping Description: Not regulated

15. REGULATORY INFORMATION

U.S. Regulations:



EPA SARA 311/312 (Title III Hazard Categories)

Acute Health:

Yes

Chronic Health:

No

Fire Hazard:

No

Status: Finai

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Pressure Hazard:

No

Reactive Hazard:

No

SARA - Section 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

-None Known-

EPA (CERCLA) Reportable Quantity (in pounds):

-None Known-

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:

None Known -

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

- None Known -

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

TSCA:

All components are listed on the TSCA inventory.

International Regulations:

Canadian Regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Domestic Substances List: Listed WHMIS Hazard Class:

Not Regulated

International Inventories:

This material is listed on the following inventories:

Australian (AICS)

Canadian (DSL)

Chinese

European (EC/EINECS)

Japanese (ENCS)

Korean (ECL)

Philippine (PÍCCS)

United States (TSCA)

Status: Final

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16. OTHER INFORMATION

Issue Date:

Previous Issue Date:

Product Code:

MSDS Code:

Revised Sections or Basis for Revision:

17-Mar-2006

01-Apr-2005

47476, 47477

Product Name / Synonyms (Section 1)

Physical Properties (Section 9)

Regulatory information (Section 15)

778724

Disclaimer of Expressed and implied Warranties:

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.





Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name:

Brakleen® Brake Parts Cleaner (aerosol)

Product Number (s):

05089, 05089-6, 05089T, 85089, 85089AZ

Manufactured By:

CRC Industries, Inc. 885 Louis Drive

Warminster, PA 18974 www.crcindustries.com General Information Technical Assistance

(215) 674-4300 (800) 521-3168

Customer Service

(800) 272-8963

24-Hr Emergency (CHEMTREC)

(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Colorless liquid, irritating odor at high concentrations

DANGER

Vapor Harmful. Contents Under Pressure.



Potential Health Effects:

EYE:

May cause slight temporary eye irritation. Vapors may irritate the eyes at

concentrations of 100 ppm.

SKIN:

Short single exposure may cause skin irritation. Prolonged exposure may cause severe skin irritation, even a burn. A single prolonged exposure is not likely to

result in the material being absorbed through skin in harmful amounts.

INHALATION:

Dizziness may occur at concentrations of 200 ppm. Progressively higher levels may also cause nasal irritation, nausea, incoordination, and drunkenness. Very high levels or prolonged exposure could lead to unconsciousness and death.

INGESTION:

Single dose oral toxicity is considered to be extremely low. Swallowing large amounts may cause injury if aspirated into the lungs. This may be rapidly

absorbed through the lungs and result in injury to other body systems.

CHRONIC EFFECTS:

Repeated contact with skin may cause drying or flaking of skin. Excessive or long

term exposure to vapors may increase sensitivity to epinephrine and increase

myocardial irritability.

TARGET ORGANS:

Central nervous system. Possibly liver and kidney.



See Section 11 for toxicology and carcinogenicity information on product ingredients.



Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Tetrachloroethylene (PERC)	127-18-4	> 95
Carbon Dioxide	124-38-9	< 5

Section 4: First Aid Measures

Eye Contact:

Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact:

Remove contaminated clothing and wash affected area with soap and water. Call a physician

if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation:

Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If

breathing is difficult give oxygen. Call a physician.

Ingestion:

Do NOT induce vomiting. Call a physician immediately.

Note to Physicians:

Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. If burn is present, treat as any thermal burn, after decontamination. Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote.



Flammable Properties:

This product is nonflammable.

Flash Point:

None (TCC)

Upper Explosive Limit:

None

Autoignition Temperature:

None

Lower Explosive Limit:

None

Suitable Extinguishing Media:

This material does not burn. Use extinguishing agent suitable for surrounding fire.

Products of Combustion:

Hydrogen chloride. Trace amounts of phosgene, and chlorine.

Protection of Fire-Fighters:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product

decomposition.

Section 6: Accidental Release Measures

Personal Precautions:

Use personal protection recommended in Section 8. Do not breathe vapors.

Environmental Precautions:

Take precautions to prevent contamination of ground and surface waters. Do not flush

into sewers or storm drains.

Methods for Containment & Clean-up:

Dike area to contain spill. Ventilate the area with fresh air. If in confined



space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures:

Vapors of this product are heavier than air and will collect in low areas. Make sure

ventilation removes vapors from low areas. Do not eat, drink or smoke while using this

product.

Storage Procedures:

Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F

to prevent cans from rupturing.

Aerosol Storage Level:

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURC E	UNIT
Tetrachloroethylene	100	N.E.	25	100	N.E.		ppm
Carbon dioxide	5000	30000 v	5000	30,000	N.E.		ppm
N.E Not Established	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(c) – ceiling	g (s)-	-skin (v) – vaca	ated	

Engineering Controls:

Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation

of vapors. Provide proper exhaust to remove vapors from low areas. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a

confined space, follow applicable OSHA regulations

Respiratory Protection:

None required for normal work where adequate ventilation is provided. Use NIOSHapproved self-contained positive pressure respirators in low circulation areas and for

emergencies.

Eye/face Protection:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid

contact, wear splash-proof goggles.

Skin Protection:

Use protective gloves such as PVA, Teflon or Viton. Also, use full protective clothing if

there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State:

liquid

Color:

colorless irritating odor

Odor:

1.619

Specific Gravity:

250 F

Initial Boiling Point:

Freezing Point: ND

Vapor Pressure: 13 mmHg @ 68 F

Vapor Density:

5.76

(air = 1)

Evaporation Rate: > 1

(ether = 1)

Solubility:

0.015 g/ 100 g @ 77 F in water

pH: NA

Volatile Organic Compounds:

wt %:

g/L: 0

lbs./gal:

Section 10: Stability and Reactivity

Stability:

Stable

Conditions to Avoid:

Avoid direct sunlight or ultraviolet sources. Avoid open flames, welding arcs, and other

high temperature sources which induce thermal decomposition.

Incompatible Materials:

Avoid contact with metals such as: aluminum powders, magnesium powders, potassium,

sodium, and zinc powder. Avoid unintended contact with amines. Avoid contact with

strong bases and strong oxidizers.

Hazardous Decomposition Products:

Hydrogen chloride, trace amounts of chlorine and phosgene

Possibility of Hazardous Reactions:

No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

Component	<u>Test</u>	Result	<u>Route</u>	. <u>Species</u>
tetrachloroethylene	LD50	> 10 g/kg	dermal	rabbit
tetrachloroethylene	LD50	2629 mg/kg	oral	rat
tetrachloroethylene	LC50	5200 mg/kg/4H	inhalation	mouse

CHRONIC EFFECTS

Carcinogenicity:

Component

Result

OSHA:

Tetrachloroethylene

Hazard communication carcinogen

IARC:

Tetrachloroethylene

2A (Probably carcinogenic)

NTP:

Tetrachloroethylene

Reasonably anticipated to be a carcinogen

Mutagenicity:

tetrachioroethylene

in vitro studies were negative animal studies were negative

Other:

None

Section 12: Ecological Information

Ecotoxicity:

Tetrachloroethylene - 96 Hr LC50 Rainbow Trout: 5.28 mg/L (static)

96 Hr LC50 Fathead minnow: 13.4 mg/L (flow-through)

Persistence / Degradability:

Biodegradation under aerobic conditions is below detectable limits.

Biodegradation may occur under anaerobic conditions. Biodegradation rate may

increase in soil and/or water with acclimation.

Bioaccumulation / Accumulation:

Bioconcentration potential is low (BCF less than 100).

Mobility in Environment:

Potential for mobility in soil is medium.

Section 13: Disposal Considerations

Disposal:

The dispensed liquid product is a RCRA hazardous waste for toxicity with the following potential waste

codes: U210, F001, F002, D039. (See 40 CFR Part 261.20 – 261.33)

Aerosol containers should be emptied and depressurized before disposal. Empty containers may be

recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground):

Consumer Commodity, ORM-D

Special Provisions:

None

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients:

Tetrachloroethylene (100 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS):

Section 311/312 Hazard Categories:

Fire Hazard

No

Reactive Hazard

Release of Pressure

No

Acute Health Hazard

Yes Yes

Chronic Health Hazard

Yes

Section 313 Toxic Chemicals:

This product contains the following substances subject to the reporting

requirements of Section 313 of Title III of the Superfund Amendments and

Reauthorization Act of 1986 and 40 CFR Part 372:

tetrachloroethylene (97.7%)



Section 112 Hazardous Air Pollutants (HAPs): tetrachloroethylene



Consumer Product Safety Act General Conformity Certification: This product was evaluated by CRC Industries, Inc., and is certified to be in compliance with the provisions of the Consumer Product Safety Act, the Federal Hazardous Substances Act and the Poison Prevention Packaging Act, as applicable. This product was manufactured at the location listed in Section 1 of this MSDS. The date of manufacture is stamped on the product container. No testing is required to certify compliance with the above

State Regulations

State Right to Know:

New Jersey:

tetrachloroethylene, carbon dioxide

Pennsylvania:

tetrachloroethylene, carbon dioxide

Massachusetts:

tetrachloroethylene, carbon dioxide

Rhode Island:

tetrachloroethylene, carbon dioxide

Additional Regulatory Information:

This product cannot be sold for use in California and New Jersey. In other

states with Consumer Products VOC regulations, this product is compliant

as a Brake Cleaner.

Section 16: Other Information

NFPA:

Health: 2

Flammability: 0

Reactivity:

HMIS:

Health: 2

Flammability: 0

Reactivity:

PPE: В

Prepared By:

Michelle Rudnick

CRC#:

491G

Revision Date:

01/07/2009

Changes since last revision:

Section 15: Additional Regulatory Information revised

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:

Chemical Abstract Service

NA:

Not Applicable Not Determined

ppm: TCC: Parts per Million

ND: NE:

Not Established grams per Liter

PMCC: PPE:

Tag Closed Cup Pensky-Martens Closed Cup

g/L: lbs./gal:

pounds per gallon

TWA:

Personal Protection Equipment Time Weighted Average

STEL:

Short Term Exposure Limit

OSHA:

Occupational Safety and Health Administration

ACGIH

NIOSH

American Association of Governmental Industrial Hygienists

National Institute of Occupational Safety & Health



CRC INDUSTRIES INC -- 2069 CABLE CLEAN AEROSOL -- 9150-00F004820

Product ID:2069 CABLE CLEAN AEROSOL

MSDS Date:07/29/1994

FSC:9150

NIIN:00F004820 MSDS Number: CFVBG

=== Responsible Party ===

Company Name: CRC INDUSTRIES INC

Address:885 LOUIS DRIVE

City: WARMINSTER

State:PA

ZIP:18974

Country: US

Info Phone Num: 215-674-4300

Emergency Phone Num:215-674-4300

Preparer's Name: ALAN BELISKER

CAGE: CRCIN

=== Contractor Identification ===

Company Name: CRC INDUSTRIES INC

Address:885 LOUIS DR

City: WARMINSTER

State:PA

ZIP:18974

Country: US

Phone: 215-674-4300

CAGE: CRCIN

Company Name: CRC INDUSTRIES, INC.

Address:885 LOUIS DRIVE

Box:City:WARMINSTER

State:PA

ZIP:18974-2820

Country: US

Phone: 215-674-4300/800-424-9300

CAGE:10136

===== Composition/Information on Ingredients =======

Ingred Name: METHYLCHLOROFORM (1,1,1-TRICHLOROETHANE) (CHLOROTHENE NU),
AEROTHANE TT, CHLOROTHENE (IARC CARC - GROUP 3) *97-2*

CAS:71-55-6

RTECS #:KJ2975000

Fraction by Wt: 60-95%

Other REC Limits: 450 PPM STEL

OSHA PEL:350 PPM

ACGIH TLV:350 PPM

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ozone Depleting Chemical:1

Ingred Name:1,3 DIOXOLANE, ETHYLENE GLYCOL FORMAL, GLYCOL METHYLENE
ETHER

220.040.00

CAS:646-06-0 RTECS #:JH6760000

Fraction by Wt: 1-10%

Ingred Name:SEC-BUTANOL ALCOHOL *97-2*

ENTERED MARI 9 2009





CAS:78-92-2

RTECS #:E01750000 Fraction by Wt: 1-10%

Other REC Limits: 100 PPM

OSHA PEL:150 PPM ACGIH TLV:303 MG/CUM

Ingred Name:CARBON DIOXIDE *97-2*

CAS:124-38-9

RTECS #:FF6400000 Fraction by Wt: 1-10%

Other REC Limits: 10000 PPM

OSHA PEL:5000 PPM ACGIH TLV:9000 MG/CUM

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO TARC:NO OSHA:NO
Health Hazards Acute and Chronic:Inhalation: ANESTHETIC. EYES/SKIN:
IRRITATION ON REPEATED EXPOSURE. MAY HAVE LIVER & KIDNEY EFFECTS.
Explanation of Carcinogenicity:NONE
Effects of Overexposure:IRRITATION, HEADACHES, DIZZINESS,
UNCONSCIOUSNESS, PAIN

Medical Cond Aggravated by Exposure: HIGH LEVELS OF VAPOR MAY CAUSE CARDIAC ARRYTHMIAS.

First Aid:INHALATION: REMOVE TO FRESH AIR. APPLY CPR. EYES: FLUSH W/LARGE AMOUNTS OF WATER FOR 15 MINS. SKIN: WASH W/SOAP & WATER. INGESTION: DON'T INDUCE VOMITING. OBTAIN MEDICAL ATTENTION IN ALL CASES.

----- Fire Fighting Measures

Flash Point Method: TCC

Flash Point:NONE

Lower Limits: 7.5 Upper Limits: 12.5

Extinguishing Media: WATER FOG

Unusual Fire/Explosion Hazard: AEROSOL CANS MAY EXPLODE WHEN HEATED >130F.

----- Accidental Release Measures

Spill Release Procedures: VENTILATE. USE ABSORBENT TO PICK UP MATERIALS.

Handling and Storage Precautions:STORE IN A COOL, DRY AREA.

Other Precautions:AVOID SKIN CONTACT/BREATHING OF VAPORS. VAPORS ARE

>AIR & WILL COLLECT IN LOW AREAS. BE SURE OF ADEQUATE VENTILATION.

IF VAPORS ARE SUSPECTED IN A LOW AREA, DON'T ENTER W/O BREATHING

APPARATUS & AN OB SERVER PRESENT FOR ASSISTANCE.

Exposure Controls/Personal Protection ========

Respiratory Protection: USE SELF CONTAINED BREATHING APPARATUS IF ACCUMULATION OF VAPORS IS SUSPECTED.



Ventilation: ADEQUATE TO PREVENT THE ACCUMULATION OF VAPORS.

Protective Gloves: SOLVENT RESISTANT

Eye Protection: SAFETY GOGGLES

Other Protective Equipment: NOT NORMALLY REQUIRED FOR AEROSOL PRODUCT

Work Hygienic Practices: REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

+----- Physical/Chemical Properties ------

Boiling Pt:B.P. Text:164F Vapor Pres:100 Vapor Density:4.55 Spec Gravity:1.293 Solubility in Water:SLIGHT

Appearance and Odor:COLORLESS LIQUID W/IRRITATING ODOR AT HIGH

CONCENTRATIONS

Percent Volatiles by Volume: 100

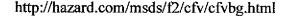
----- Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
STORING IN ALUMINUM CONTAINERS & CONTACT W/ALUMINUM/ZINC POWDERS
Stability Condition to Avoid:OPEN FLAME, ARCS, HIGH TEMPS
Hazardous Decomposition Products:THERMAL: HYDROGEN CHLORIDE, CHLORINE &
SOME PHOSGENE

----- Disposal Considerations -----

Waste Disposal Methods: DISPOSE OF IN ACCORDANCE W/LOCAL, STATE & FEDERAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.





MATERIAL SAFETY DATA SHEET

PRODUCT NAME CDT CUTTING OIL (AEROSOL)

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name

CRC INDUSTRIES (AUST) PTY LIMITED

Address

9 Gladstone Road, Castle Hill, NSW, AUSTRALIA, 2154

Telephone

(02) 9849 6700

Fax Emergency (02) 9680 4914

131 126

Email

info@crcind.com.au

Web Site

http://www.crcind.com.au/

Synonym(s)

CUTTING OIL CDT • CRC CDT CUTTING OIL (AEROSOL) • 3063 - MANUFACTURER'S CODE

Use(s)

AEROSOL DISPENSED • LUBRICANT

MSDS Date

01 January 2006

2. HAZARDS IDENTIFICATION

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO NOHSC CRITERIA

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN No.

1950

DG Class

2.1

Subsidiary Risk(s) None Allocated

Pkg Group

None Allocated

Hazchem Code 2Y

EPG

2D1

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
PETROLEUM DISTILLATE, NAPHTHENIC, HYDROTREATED	Not Available	64742-52-5	>60%
LIQUEFIED PETROLEUM GAS (LPG)	C3H8/C3H6/C4H10	68476-85-7	10-30%
ADDITIVES	Not Available	Not Available	<10%

4. FIRST AID MEASURES

Eye

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to

stop by the Poison Information Centre or a doctor, or for at least 15 minutes.

Inhalation

If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.

Skin

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue

flushing with water until advised to stop by the Poisons Information Centre or a doctor.

Ingestion

For advice, contact a Poisons Information Centre or a doctor (at once). If swallowed, do not induce vomiting.

Advice to Doctor

Treat symptomatically

CHEM ALERT

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PRODUCT NAME CDT CUTTING OIL (AEROSOL)

5. FIRE FIGHTING MEASURES

Flammability Combustible. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition.

Fire and Explosion Combustible. Evacuate area and contact emergency services. Toxic gases (hydrocarbons, carbon oxides) may be evolved when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers

and nearby storage areas.

Extinguishing Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways.

Hazchem Code

6. ACCIDENTAL RELEASE MEASURES

Spillage

If can is punctured, clear area of all unprotected personnel and ventilate area (if in confined area). Wearing splashproof goggles, PVC/rubber gloves and coveralls, collect and allow to discharge outdoors. If discharge occurs in confined or poorly ventilated area, a Type A-Class P1 (Organic vapour and Particulate) respirator is required. Absorb residues with sand or similar and place in clean containers for disposal.

7. STORAGE AND HANDLING

Storage

Store in cool, dry, well ventilated area, removed from sunlight, heat & ignition sources, oxidising agents, acids, alkalis and foodstuffs. Ensure aerosol containers/ cans are adequately labelled, protected from physical damage and sealed when not in use. Inspect regularly for damaged/ leaking containers. Large storage areas should have appropriate fire protection and ventilation systems.

Handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating. drinking and smoking in contaminated areas.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Stds

Ingredient	Reference	1	AWT		STEL	
		ppm	mg/m3	ppm	mg/m3	
LIQUEFIED PETROLEUM GAS (LPG)	NOHSC (AUS)	1000.0	1800.0	1000.0	1800.0	
Oil mist, refined mineral	NOHSC (AUS)	_	5.0	 -	_	

Biological Limits No biological limit allocated.

Engineering Controls

Use with adequate natural ventilation. Where vapour or mist generation is possible, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

PPE

Wear splash-proof goggles and rubber or PVC gloves. Where an inhalation risk exists, wear a Type A (Organic vapour) Respirator. If spraying, wear a Type A-Class P1 (Organic gases/vapours and Particulate) Respirator and coveralls.





9. PHYSICAL AND CHEMICAL PROPERTIES

BROWN LIQUID (AEROSOL Appearance Solubility (water) INSOLUBLE DISPENSED) Odour MINERAL OIL ODOUR Specific Gravity 0.924 ρН NOT AVAILABLE % Volatiles 20 % Vapour Pressure **NOT AVAILABLE** Flammability COMBUSTIBLE Vapour Density > 1 (Air = 1)Flash Point > 150°C **Boiling Point** NOT AVAILABLE **Upper Explosion Limit NOT AVAILABLE Melting Point** NOT AVAILABLE Lower Explosion Limit NOT AVAILABLE **Evaporation Rate** NOT AVAILABLE Autoignition Temperature NOT AVAILABLE

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PRODUCT NAME CDT CUTTING OIL (AEROSOL)

10. STABILITY AND REACTIVITY

Incompatible with oxidising agents (eg. hypochlorites, peroxides), acids (eg. sulphuric acid), alkalis (eg.

hydroxides), heat and ignition sources.

Decomposition May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary

Low toxicity. Use safe work practices to avoid eye contact, prolonged and repeated skin contact and vapour or mist generation-inhalation. The mineral oil contained within this product is highly refined and therefore is not classifiable as to its carcinogenicity in humans (IARC Group 3). When using small quantities, the potential for over

exposure is reduced.

Eye

Low to moderate imitant. Contact may result in irritation, lacrimation, pain and redness.

Inhalation

Low irritant - slightly narcotic. Over exposure to vapours/ mists at high levels may result in upper respiratory tract irritation, cough, nausea and headache. At very high levels (poorly ventilated areas) dizziness, drowsiness and breathing difficulties may occur.

Skin

Low irritant. Prolonged or repeated contact may result in mild irritation, rash and dermatitis.

Ingestion

Low to moderate toxicity, Ingestion may result in nausea, vomiting, abdominal pain and drowsiness with large quantities. Aspiration may result in chemical pneumonitis and pulmonary oedema. Ingestion is considered unlikely

due to product form.

Toxicity Data

No LD50 data available for this product.

12. ECOLOGICAL INFORMATION

Environment

Mineral oils biodegrade slowly and should not be released to waterways or soil. They can float on water, restricting oxygen exchange with possible asphyxiation of aquatic life.

13. DISPOSAL CONSIDERATIONS

Waste Disposal

For small amounts absorb contents with sand or similar and dispose of to an approved landfill site. Do not puncture or incinerate aerosol cans. Contact the manufacturer for additional information.

Legislation

Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION



CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

Shipping Name

AEROSOLS

UN No.

1950

DG Class

2.1 2Y

Subsidiary Risk(s) None Allocated

Pka Group

None Allocated

Hazchem Code

EPG

2D1

15. REGULATORY INFORMATION

Poison Schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform

Scheduling of Drugs and Poisons (SUSDP).

AICS

All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information

MINERAL OILS - SOLVENT REFINED: Animal experiments and human experience have not shown cancer risks when handling solvent refined mineral oils, unlike non refined mineral oils. CLEANING MINERAL OIL CONTAMINATED CLOTHING: Cleaners are advised that when cleaning oil contaminated clothing it is essential that freshly distilled solvent is used for each batch, including final rinse, as even filtered solvent will leave oil residues.

AEROSOL CANS may explode at temperatures approaching 50°C.

CHEM ALERT

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PRODUCT NAME CDT CUTTING OIL (AEROSOL)

MINERAL OILS - INJECTION; Where high pressure applications are used the risk of accidental injection under the skin exists and may result in an extremely painful and serious injury requiring immediate medical attention. Depending on the pressure used, mineral oils may be injected a considerable distance below the skin and may cause permanent tissue damage. SEEK IMMEDIATE MEDICAL ATTENTION. EXERCISE EXTREME CARE WHEN USING HIGH PRESSURE EQUIPMENT.

ABBREVIATIONS:

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EINECS - European Inventory of Existing Commercial chemical Substances.

IARC - International Agency for Research on Cancer.

M - moles per litre, a unit of concentration.

mg/m3 - Milligrams per cubic metre.

NOS - Not Otherwise Specified.

NTP - National Toxicology Program.

OSHA - Occupational Safety and Health Administration.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

TWA/ES - Time Weighted Average or Exposure Standard.

HEALTH EFFECTS FROM EXPOSURE:

It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

Report Status

This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Material Safety Data Sheet ('MSDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this MSDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this MSDS.

Prepared By

Risk Management Technologies 5 Ventnor Ave, West Perth Western Australia 6005 Phone: +61 8 9322 1711 Fax: +61 8 9322 1794 Email: info@rmt.com.au Web: www.rmt.com.au

> MSDS Date: 01 January 2006 End of Report

CHEM ALERT

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Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name:

Chain & Wire Rope Lube (Aerosol)

Product Number (s):

03050, 83050

Manufactured By:

CRC Industries, Inc. 885 Louis Drive

Warminster, PA 18974 www.crcindustries.com

General Information Technical Assistance **Customer Service**

(215) 674-4300

(800) 521-3168

(800) 272-4620

24-Hr Emergency (CHEMTREC)

(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Clear, light amber liquid with mild solvent odor

DANGER

Extremely flammable. Harmful or fatal if swallowed. Contents under pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE:

May cause mild irritation including stinging and redness, but does not injure eye.

SKIN:

Single, brief exposures may cause mild irritation. Frequent or prolonged contact

may cause more severe irritation, defatting of the skin, and dermatitis.

INHALATION:

High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system

disorder and/or damage.

INGESTION:

Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary adema, possible progressing to death.

CHRONIC EFFECTS:

Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.

TARGET ORGANS:

central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure:

skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	various	55 - 65
n-Hexane	110-54-3	4.4
Acrylic copolymer	proprietary	5 - 10
Molybdenum complex	72030-25-2 / 64742-52-5	<1
Liquefied petroleum gas	68476-86-8	25 - 35

Section 4: First Aid Measures

Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists. Eye Contact:

Remove contaminated clothing and wash affected area with soap and water. Call a physician Skin Contact:

if irritation persists. Wash contaminated clothing prior to re-use.

Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If Inhalation:

breathing is difficult give oxygen. Call a physician.

DO NOT induce vomiting. Contact a physician immediately. Ingestion:

Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at Note to Physicians:

your discretion.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol

flammability definitions (16 CFR 1500.3(c)(6)).

Upper Explosive Limit: 9.0 Flash Point: < 0 F (TCC)

1.7 Autoignition Temperature: 489 F Lower Explosive Limit:

Class B fire extinguishers, dry chemical, foam or CO2 Suitable Extinguishing Media:

Products of Combustion: fumes, smoke and carbon monoxide

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for Protection of Fire-Fighters:

protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water fog or spray to keep fire-exposed

containers cool and to knock down vapors which may result from product

decomposition. Do not spray water directly on fire; product will float and could be

reignited on surface of water.

Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Personal Precautions:

Product Number (s): 03050, 83050

Environmental Precautions:

Take precautions to prevent contamination of ground and surface waters. Do not flush

into sewers or storm drains.

Methods for Containment & Clean-up:

Dike area to contain spill. Remove all sources of ignition. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures:

Use proper grounding and bonding procedures for transferring materials. Do not use product

near any source of ignition. Do not touch container to electrical sources as container will

conduct electricity. Avoid contact with eyes and skin. Avoid breathing vapors.

Storage Procedures:

Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F

to prevent cans from rupturing.

Aerosol Storage Level:

Ш

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OS	SHA	AC	GIH	С	THER	
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Acrylic copolymer	NE	NE	NE	NE	NE		
Molybdenum complex	NE	NE	NE	NE	NE		
Liquefied petroleum gas	1000	NE	1000	NE	NE		ppm
N.E. – Not Esta	ablished	(c) – ceilin	g (s)-	– skin	(v) – vac	ated	

Engineering Controls:

Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation

of vapors. Use mechanical means if necessary to maintain vapor levels below the exposure

guidelines. If working in a confined space, follow applicable OSHA regulations

Respiratory Protection:

None required for normal work where adequate ventilation is provided. Use a NIOSH-approved cartridge respirator with an organic vapor cartridge if vapors exceed exposure limits. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid

contact, wear splash-proof goggles.

Skin Protection:

Use protective gloves such as nitrile, PVC or Viton. Also, use full protective clothing if there

is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Product Number (s): 03050, 83050

Physical State:

liquid

Color:

clear, light amber

Odor:

mild solvent

Specific Gravity:

0.6327

Initial Boiling Point:

140 F

Freezing Point: <-76 F

Vapor Pressure: 160 mmHg @ 68 F

> 1

(air = 1)

Vapor Density: Evaporation Rate: 19

(Butyl acetate = 1)

Solubility:

negligible in water

pH:

NA

Volatile Organic Compounds:

wt %:

92.1

582.7 q/L:

lbs./gal:

4.85

Section 10: Stability and Reactivity

Stability:

Stable

Conditions to Avoid:

sources of ignition, temperature extremes

Incompatible Materials:

strong oxidizers

Hazardous Decomposition Products:

oxides of carbon

Possibility of Hazardous Reactions:

No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

Component	<u>Test</u>	Result	<u>Route</u>	<u>Species</u>
n-hexane	LD50	28710 mg/kg	Oral	Rat
n-hexane	LD50	3000 mg/kg	Dermal	Rabbit
n-hexane	LC50	48000 ppm/4H	Inhalation	Rat

CHRONIC EFFECTS

Carcinogenicity:

Component

Result

OSHA:

None listed

JARC:

None listed

NTP:

None listed

Mutagenicity:

No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Product Number (s): 03050, 83050

Ecotoxicity:

n-hexane - 48 Hr EC50 water flea: 3.87 mg/L

96 Hr LC50 Lepomis macrochirus: 4.12 mg/L

Persistence / Degradability:
Bioaccumulation / Accumulation:

No information available

Mobility in Environment:

No information available No information available

Section 13: Disposal Considerations

Disposal:

The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste

code of D001 (See 40 CFR Part 261.20 - 261.33).

Aerosol containers should be emptied and depressurized before disposal. Empty containers may be

recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground):

Consumer Commodity, ORM-D

Special Provisions:

None

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients:

n-hexane (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard

Yes

oconon or more mazara oategories.

Reactive Hazard

NI.

Release of Pressure

No

Acute Health Hazard

Yes Yes

Chronic Health Hazard

Yes

Section 313 Toxic Chemicals:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and

Reauthorization Act of 1986 and 40 CFR Part 372:

n-hexane (4.4%)

Product Name: Chain & Wire Rope Lube (Aerosol) Product Number (s): 03050, 83050

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane

State Regulations

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm:

NONE

State Right to Know:

New Jersey:

75-83-2, 110-54-3, 79-29-8, 68476-86-8

Pennsylvania:

107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8 107-83-5, 75-83-2, 110-54-3, 79-29-8, 68476-86-8

Massachusetts: Rhode Island:

110-54-3, 68476-86-8

Additional Regulatory Information:

None

Section 16: Other Information

NFPA:

Health: 2 Flammability:

Reactivity:

HMIS:

Health: 2 Flammability:

Reactivity:

PPE: В

Prepared By:

Michelle Rudnick

CRC #:

572E

Revision Date:

12/7/2006

Changes since last revision:

Formula number revised

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:

Chemical Abstract Service

NA:

Not Applicable

ppm:

Parts per Million

ND:

Not Determined

TCC: PMCC: Tag Closed Cup

NE: g/L: Not Established grams per Liter

PPE:

Pensky-Martens Closed Cup Personal Protection Equipment

lbs./gal:

pounds per gallon

TWA:

Time Weighted Average

STEL:

Short Term Exposure Limit

OSHA:

Occupational Safety and Health Administration

ACGIH

American Conference of Governmental Industrial Hygienists

NIOSH

National Institute of Occupational Safety & Health



ITEM: 2CVB7 - Lamp 500T30/130 PK 4

PICK REO: 1076712550

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B1741

INCLUMENTAL SECTION OF THE NOSE AND THEORY WITH MOUSE PRODUCTION AND INDUSTRIES. Associated Grainger Etem: 2CVE7 - Lamp 500T30/130 PK 4 WEITHYL BROMIDE: METHYL BROWIDE:
SHORT-THEM ECOPOSIRE TO METHYL BROWIDE MAY CAUSE HEADACHE, DIZZINSSS, SHIEFFA, VOMITING, BLURRED VISION, SLURRED SPEECH, AND CONVISIONS, SIGH CONSENITATIONS MAY ALSO CAUSE UNCONSCIOUSNESS AND DEATH HIGH CONCENTRATIONS MAY ALSO CAUSE UNCONSCIOUSNESS AND DEATH HIGH CONCENTRATIONS MAY ALSO CAUSE UNCONSCIOUSNESS AND DEATH HIGH CONCENTRATIONS MAY ALSO CAUSE UNCONSCIOUSNESS AND CONSETT. FOR MANGE IS ALSO POSSIBLE. LUNG FFECCIS MAY BE DELAYED IN ONSET. PROLONGED OR REPEATED EXCOSURE TO METHYL BROWIDE MAY CRUSE A VARIETY OF SYMPTOMS DUE TO INJURY TO THE CONTRAL MERCHOS SYSTEM; INCLIDING VISIAL DISTURBENCES, SILENDED SPEECH, NUMBERES OF LIMES, CONFUSION, SHAKING, AND UNCONSCIOUSNESS. 2CVA6, 2CVA7, 2CVA8, 2CVA9, 2CVB1, 2CVB2, 2CVB3, 2CVB4, 2CVB6, 2CVB6, 2CVB7, 2CVB9, 2PGM6, 2PGM6, 2PGM2, 2PGM2, 2PGM3, 2PGM4, 2PGM5, 2PGM6, 2PGM7, 2PGM6 WESTTMENCHER ENTERED MATERIAL SAFETY DATA SHEET PRODUCT: TUNGSTEN HALOGEN LAMPS MEINIL ROUDS: EXPOSURE TO METHYL IODIDE MAY CAUSE NAUSEA AND VONITING, DIARRHEA, DIZZINESS, SLUKRED SPEECH, VISUAL DISTURBANCES, STAGESRING, SHAKING, IRRITABILITY, DROWSINESS, COMA, AND DEWIH. IT MAY IRRITATE THE RES AND LUNGS. PROLONGED EXPOSURE TO METHYL IODIDE MAY CAUSE SKIN IRRITATION. - SECTION 1: MA MANUFACTURE'S NAME AND ADDRESS: WESTINGHOUSE LIGHTING CORPORATION 12401 MCNULLY ROAD PHILADELPHIA, PENNSYLVANIA 19154 CLARIZ FUSED: FLEROSIS OF THE LUNCS CAUSING SHORINESS OF HERMIH AND COUGHING HAS BEEN ASSOCIATED WITH SILICA EXPOSURE. EMERGENCY TELEPHONE NO.: 800-248-6900 CLASS: CLASS DUST IS CONSTIDERED TO BE PHYSIOLOGICALLY INERT AND AS SUCH HAS AN OCHA REPOSURE LIMIT OF 15 ME/CUBIC METER FOR TOTAL DUST AND 5 ME/CUBIC METER FOR RESPIRABLE DUST. - SECTION 2: HAZARDOUS INGREDIENTS -THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSTIRE TO LAMPS THAT ARE INTRACT. IF A LAMP IS BROKEN, SOME OF THE FOLLOWING MATERIALS MAY BE RELEASED: INHALATION OF DUST MAY CAUSE MILD IRRITATION OF NOSE AND THROAT. CONTACT MAY CAUSE MECHANICAL IRRITATION OF SKIN AND EYES. CAS NUMBER % BY WT. EXPOSURE LIMITS IN AIR (ME/CUBIC M) ACSIH (TLV) CHEMICAL NAME NOLYBURNUM: OKUDES HAVE CAUSED IRRUPATION TO THE EYES, NOSE, AND THREAT; WEIGHT LOSS AND DIGESTIVE DISTURBANCES IN EXPERIMENTAL ANIMALS. CSHA (PEL) HYDROGEN BROWLDE 10035-10-6 0-<1.0 10.0 CEILING 10.0 EMERCHARY FIRST AID: METHYL BROWLDE 74-83-9 0-<1.0 20.0 CELLING GLASS CUTS: PSRFORM NORMAL FIRST AID PROCEDURES. SEEK MEDICAL ATTENTION AS REQUIRED. 28.0 74-88-4 0-<0.05 10.0 (1) METHYL IODIDE THEORY 7440-33-7 0.05-1.0 INVENIORIE IN INVENIORI OR SYMPTOMS OF PURICHARY INVOLVEMENT DEVELOP, REMOVE FROM EXPOSURE AND SEEK MEDICAL ATTENTION AS NEEDED. (INSOLUBLE COMPOUNDS) INHALATION: IP DISCOMFORT, IRRUTATION OR SYMPTOMS OF PULMONARY INVOLVEMENT DEVELOP, REMOVE FROM EXPOSURE AND SIZER MEDICAL INTERNITION. MOLVEDENIM 7439-98-7 0.02-1.0 15 (INSOLUBILE COMPOUNDS) 10 GLASS (MIKALINE BARTH ALUMINOSTLICATE) 0-95 10 (2) 15 (2) INGRETION: IN THE UNLIKELY EVENT OF INSESTING A LARGE QUANTITY OF MATERIAL, SEEK MEDICAL ATTENTION IMMEDIATELY. 60676-86-0 0-95 0.1 RESP. DUST 0.1 CONTACT SKIN: THOROGENLY WASH AFFECTED AREA WITH MILD SOAP OR DETERGENT AND WATER AND PREVENT FURTHER CONTACT. SEEK MEDICAL ATTENTION AS NEEDED. (1) THESE CHEMICALS ARE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMERICANS AND RESULTABLE TITLE ARE 372. (2) LIMITS AS NUISANCE PARTICULATE. WACH RYES, INCLUDING UNDER EYELIDS, IMMEDIATELY WITH COPIOUS AMOUNT OF WATER FOR 15 MINUTES. SEEK MEDICAL ATTENTION. CARCINOGENIC ASSESSMENT (NTP ANNUAL RPEFORT. LARC MINIOGRAPHS, OTHER): NONE - SECTION 3: CHEMICAL/PHYSICAL DATA -NOT APPLICABLE TO INTACT LAMP. - SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE IF LAMPS ARE ERCREN, VENTILATE AREA WHERE BRRAKAGE OCCURRED. CLEAN-UP BY VACIDATING OR OTHER METHOD THAT AVOIDS DUST GENERATION. TARE USUAL PRECAPITIONS FOR COLLECTION OF EROKEN GLASS. PLACE MATERIALS IN CLOSED CONTAINERS TO AVOID GENERATING DUST. - SECTION 4: FIRE AND EXPLOSION DATA -FLAMMABILITY: NON-COMBUSTIBLE FIRE EXTINGUISHING MATERIALS:
USE EXTINGUISHING ACERYTS SUITABLE FOR SURROUNDING FIRE. IT IS THE RESPONSIBILITY OF THE WASTE GENERATOR TO ENSURE PROPER CLASSIFICATION OF WASTE PRODUCTS. TO THAT END, TCLF TREES SHOULD BE CONDUCTED ON ALL WASTE PRODUCTS, INCLUDING THIS ONE, TO DETERMINE THE ULTIMATED DISPOSITION IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. SPECIAL FIREFIGHTING PROCEDURE:
USE A SELF-CONTAINED EREATHING APPARATUS TO PREVENT INHALATION OF DIST
AND/OR FUNES THAT MAY BE GENERATED FROM BROKEN LAMPS DURING FUREFIGHTING ACTIVITIES. UNUSUAL FIRE AND EXPLOSION HAZARDS: WHEN EXPOSED TO HIGH TENERRATURE, TOXIC FUMES MAY BE RELEASED FROM BROKEN LAMPS. - SECTION 8: CONTROL MEASURES -VENTILATION: USE ADSOLATE GENERAL AND LOCAL EXHAUST VENTILATION TO MAINTAIN EXPOSURE LEVELS ESLOW THE PEL OR TLV LIMITS. IF SUCH VENTILATION IS UNAVAILABLE, USE RESPIRATORS AS SPECIFIED BELOW. - SECTION 5: REACTIVITY DATA -RESPIRATORY PROTECTION: USE APPROPRIATE NICSH APPROVED RESPIRATOR IF AIREORNE DUST CONCENTRATIONS EXCORD THE PERCINENT PEC OR TAY LIMITS. ALL APPROPRIATE REQUIREMENTS SET FORTH IN 29 CPR 1910.134 SHOULD BE MET. STABILITY: LAMP IS STABLE. CONDITIONS TO AVOID: NONE FOR INTACT LAMPS INCOMPATIBILITY (MATERIALS TO AVOID): NONE FOR INTACT LAMPS EVIC PROTECTION: OSHA SPECIFIED SAFETY GLASSES, GOOGLES OR FROE SHIELD ARE RECOMMENDED FOR DEALING WITH BROKEN LAMPS. HAZARDORS DECOMPOSITION PRODUCTS: NOME FOR INTACT LAMPS. HAZARDOUS POLYMERIZATION PRODUCTS: WILL NOT OCCUR. PROTECTIVE CLOTHING: OSHA SPECIFIED GLOVES ARE RECOMMENDED FOR DEALING WITH BROKEN LAMPS.

HYGIENIC PRACTICES:

AFTER HANDLING BROKEN LAMPS, WAS THUROUGHLY BEFORE FATING, SMOKING OR USING TOTLET FACILITIES.

SPUTION 6: HEALTH HAZARD DATA

THERE ARE NO KNOWN HEALTH HAZARDS FROM EXPOSIBE TO LAMPS THAT ARE INTACT.
NO ADVERSE EFFECTS ARE EXPECTED FROM OCCASIONAL EXPOSURE TO EXCEN LAMPS.
AS A MATTER OF GOOD PRACTICE, AVOID PROLONGED FOR PREVIOUR EXPOSURE TO
ERCORE LAMPS UNESS THERE IS ADDITIONED WAITLATION. THE MAJOR HAZARD FROM
ERCOREN LAMPS IS THE POSSIBILITY OF SUSTAINING GLASS CHIS.

FFECTS OF OVEREXPOSURE TO BROKEN LAMPS BY INHALATION, INGRISTION, OR INTACT (SKIN OR FYE):

HYDROGEN BROWIDE: SHERT-TERM EXPOSITE TO HYDROGEN EXOMIDE MAY CAUSE IRRETATION OF THE EYES, NOSE AND THROAT. IT WILL CAUSE A BURN WHEN A SOLUTION IS SPLASHED ONIO SKIN

KMB00011244

ITEM: 5LE23 - Battery AA 1.5v Pk24

PICK REG: 1076712550

(x) WILL NOT OCCUR

CONDITIONS TO AVOID: NOT APPLICABLE

AZARDOUS DECOMPOSITION PRODUCTS:
HENMAL DECRADATION MAY PRODUCE HAZARDOUS FUMES OF ZINC AND MANCANESE;
HYDROGEN GAS; CAUSTIC VAPORS OF FOTASSIUM HYDROXIDE AND OTHER TOXIC
BY-PRODUCTS.

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A6884

HEREKURARAGURUK METANGKANTAN METANGKAN OCCUPATIONAL EXPOSURE LIMITS PEL'S, TLV'S, ETC.) Associated Grainger Piem: 51#23 - Battery AA 1.5v Pk24 8-ROUR TWAS: MANGANESE DICKTHE (AS Mn): 5.0 MG/MB (CEILING) (CSSA) 0.2 MG/MB (ACSIH/GILLETTE) CILLETTS INVIRCEMENT HAUTH AND SAINTY ENTERED NEETHAM, MA 02492 POTASSIUM HYDROXIDE: 2 MG/MB (CKILING) (ACGIH) TEL: 781,292,8151 GRAPHITE (ALL KENDS EXCEPT FIBROUS): 2 MS/M (ACCTE; (STATHETIC) 15 MS/M (TOTAL, OSHA) 5 MC/M (RESPIRABLE, OSHA) MAR 1 9 2009 MATERIAL SAFETY DATA SHEET NAME: DURACELL PROCELL PROFESSIONAL ALKALINE BATTERIES THISSE LEVELS ARE NOT ANTICIPATED UNDER NORMAL CONSUMER USE CONDITIONS. CAS NO: NOT APPLICABLE WISHT STORE STANDARD STORES EFFECTIVE DATE: 11/06/2003 ROUTES/REFECTS OF EXPOSURE:
THESE CHEMICALS AND METALS ARE CONTAINED IN A SEALED CAN. FOR CONSIMER USE,
ADEQUACE HAZARD WARNINGS ARE INCLUDED ON BOTH THE PACKAGE AND ON THE
BATTERY. POTENTIAL FOR EXPOSURE SHOULD NOT EXIST UNLESS THE BATTERY LEAKS,
IS EXPOSED TO HIGH TEMPERATURES OR IS MECHANICALLY, PHYSICALLY, OR
ELECTRICALLY ABUSED. CONTAINS CONCENTRATED (APPERX. 354) POTASSIUM
EYPROXIDE, WHICH IS CAUSTIC. ANTICIPATED POTENTIAL LEARAGE VOLUME OF
POTASSIUM HIKKORIDE IS 2 TO 20 ML, DEPENDING ON SIZE. A SIMILAR ANOMATO OF
ZINC MAY ALSO LEAK. राक्टर- ३ — A. - TOWNSTEECATION MANGANESE DIOXIDE (1313-13-9) 35-40 10-25 ZINC (7440-66-6) INHALATION: 1. INMALARTION:
RESPIRATORY (AND EYE) IRRITATION MAY OCCUR IF FUMES ARE RELEASED DUB TO HEAT
OR AN ABUNDANCE OF LEAKING BATTERIES. POTASSIUM HYDROXIDE (35%) (1310-58-3) 5-10 GRAPHITE, NATURAL (7782-42-5) OR SYNTHETIC (7440-44-0) 1-5 2. INGESTION:
NOT ANTICIPATED DUE TO SIZE OF BATTERIES; CHOKING MAY COOR WITH THE SMALLER
HAA BATTERY. IRRITATION, INCLUDING CAUSTIC BURNS/INJURY, MAY OCCUR FOLLOWING
EXPOSURE TO A LEAKING BATTERY. FORMULA: MIXTURE MOVEMENT OF THE PROPERTY. PROCELLA LIKALINE MANGANESE DIOXIDE BATTERIES:
PC1300 (D); PC1400 (C); PC1500 (AA); PC2400 (AAA); PC303 (LANTERN); PC308 (6V); PC315 (6V); PC318 (6V); PC316 (9V); PC3100 (N); PC7K67 (J) AND BATTERIES COMPRISED OF THESE CELLS. A. CONTACT: IRRITATION, INCLIDING CAUSTIC BURNS/INJURY, MAY COCUR FOLLOWING EXPOSURE TO A LEARING BATTERY B. ABSORPTION: NOT ANTICIPATED. --- R - PHYSTCAT, DATA 4. EYE CONTACT:
INSTRUCTION, INCLIENCE CAUSTIC/BURNS/INJURY, MAY OCCUR FOLLOWING EXPOSURE TO
A LEAKING BATTERY. BOILING POINT: NA DEG. F NA DEG. C S. OTHER: NOT APPLICABLE MATING POINT: NA DEG. F - S. - KNVIROBOKNIAL IMPACI - APPLICABLE REGULATIONS: ALL INGREDIENTS LISTED IN TSCA INVENTORY. FREEZING POINT: NA DEG. F NA DEG. C 2. DOT HAZARD CLASS: NOT APPLICABLE 3. DOT SHIPPING NAME: NOT APPLICABLE SPECIFIC GRAVITY (H2O=1): NA VAPOR DENSITY (AIR=1): NA THESE BATTERIES ARE NOT REGULATED BY U.S. DOT OR INTERNATIONAL AGENCIES AS HAZARDOUS MATERIALS OR DANGEROUS GCODS WHEN SATEPED. DURACELL USES THE ARTICLE NAME 'ALKALINE EATTERIES - NON-HAZARDOUS' ON ALL DOMESTIC AND INTERNAL BILLS OF LADING. VAPOR PRESSURG @ DEG. F: NA MMHq EVAPORATION (EINER = 1): NA ENVIRONMENTAL REFECTS: THISSE HATTERIES PASS TEE U.S. EPA'S TOXICITY CHARACTERISTIC LEACHING PROCEDURE AND THEREFORE, MAY BE DISPOSED OF WITH NORMAL WASTE. SATURATION IN ATRICKY WOLLIMS @ DRG. F) - NA AUTOIGNITION TEMPERATURE DEG. F DEG. C: NA % VOLATILES: NA - P. - EXPOSURE CONTROL METERODS SOLDBILLTY IN WATER: NA ENCINERRING CONTROLS: GENERAL VENTTIATION UNDER NORMAL USE CONDITIONS. EYE PROTECTION: NOWE UNDER NORMAL USE CONDITIONS. WEAR SAFETY GLASSES WHEN HANDLING LEAKING BAITERIES. APPEARANCE/COLOR: CYLINDRICAL BATTERIES. CONTENTS DARK IN COLOR. FLASH POTNT AND TEST METHOD(S): NA SKIN PROTECTION: NONE UNUER NORMAL USE CONDITIONS. USE NEOPREME, RUBBER OR LATEK-MITRILS CLOVES WHEN HANDLING LEAKING BATTERIES. FLAMMABLE LIMITS IN AIR (% BY VOLUMB): LOWER: NA % UPPER: NA % RESPIRATORY PROTECTION: NONE UNDER NORMAL USE CONDITIONS. OTHER: KEEP BATTERIES AWAY FROM SMALL CHILLREN. - C. - REACTIVITY -STREET, TIPP-(X) STABLE () UNSTABLE - G. - WORK PRACTICES -HANDLING AND STORAGE:
STORE AT ROOM TEMPERATURE, AVOID MECHANICAL OR ELECTRICAL ASUSE. DO NOT SHORT OR INSTALL INCORRECTIV. RATTERIES MAY EXPIDITE, PURLITZE OR VERI IF DISASSEMBLED, ORIGISED, REPERAGED OR SPICESD TO HIGH TEMPERATURES. INSTALL BATTERIES IN ACCORDANCE WITH EQUIPMENT INSTRUCTIONS. DO NOT MIX RATTERY SYSTEMS, SUCH AS ALKALINE AND ZINC CARBON, IN THE SAME EQUIPMENT, REPLACE ALL BATTERIES IN EQUIPMENT AT THE SAME TIME. DO NOT CARRY EXTTERIES LOOSE IN POCKET OR RAG. CONDITIONS TO AVOID: DO NOT HEAT, CRUSH, DISASSEMBLE, SHORT CIRCUIT OR RECHARGE. INCOMPATIBLE MATERIALS: CONTROLS INCOMPATIBLE WITH STRONG OKCULZING AGENCS. POLYMERIZATION:

NORMAL CLEAN UP: NOT APPLICABLE

WASTE DISPOSAL METHODS:
INDIVIDUAL CONSIMES MAY DISPOSE OF SPENT (USED) BATTERIES WITH HOUSEHOLD
TRASH, DURACELL DIES NOT RECOMMEND THAT SPENT BATTERIES BE ACCUMILATED
(QUANTITUES OF FIVE GALLONS OR MORE SECULD BE DISPOSED OF IN A SECURE
LANDFILL), IN ACCORDANCE WITH APPROPRIATE FEBERAL, STATE AND LOCAL,
REGULATIONS, DO NOT INCINERATE, SINCE BATTERIES MAY EXPLODE AT EXCESSIVE
TEMPERATURES.

- H. - EMERGENCY PROCEDURES -

STRES TO BE TAKEN IF MATERIAL IS RELEASED TO THE ENVIRONMENT OR SPILLED IN

SINGS TO BE TAKEN IF WATERIAL IS RELEASED TO THE ENVIRONMENT OF THEM DAY THE WORK AREA:
NOTIFY SAFETY PERSONNEL OF LARGE SPILLS, CAUSTIC POTASSION HUDGOTHE MAY BE
RELEASED FROM LEAKING OR REPTURED BATTERIES, AVOID ESE OR SKIN CONTACT AND
THEMALATION OF VAPORS, INCREASE VENTILATION, CLEAN-UP PERSONNEL SHOULD WEAR
APPROPRIATE PROTECTIVE GEAR.

FIRE AND EXPLOSION HAZARD: BATTERIES MAY BURST AND RELEASE HAZARDOUS DECOMPOSITION PRODUCTS WHEN EXPOSED TO A FIRE SITUATION. SER SEC. C.

EXTINGUISHING MEDIA: AS APPROPRIATE FOR SURROUNDING AREA.

FIREFICETING PROCEDURES: USE SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR.

- I. - FIRST AID AND MEDICAL EMERGENCY PROCEDURES -

EYES: NOT ANTICIPATED. IF BATTERY IS LEAKING AND MATERIAL CONTACTS EYES, FLUEH WITH CODIOUS AMOUNTS OF CLEAR, TEPID WATER FOR 30 MUNUTES. CONTACT PHYSICIAN AT CNCE.

SKIN: NOT AUTICUPATED. IF BATTERY IS LEAKING, IRRIGATE EXPOSED SKIN WITH COPIOUS AMJUNT OF CLEAR, TEPID WATER FOR AT LEAST 15 MINUTES. IF IRRITATION, INJURY OR PAIN PERSISTS, CONSULT A PHYSICIAN.

INHALATION: NOT ANTICIPATED. IF BATTERY IS LEAKING, CONTENTS MAY BE IRRITATING TO RESPIRATORY PASSAGES. REMOVE TO FRESH ATR. CONTACT PHYSICIAN IF IRRITATION PERSISTS.

INCESTION: NOT ANTICIPATED. RINSE THE MOUTH AND SURROUNDING AREA WITH CLEAR, TREVID WARDER FOR AT LEAST 15 MINUTES, CONSULT A BHYSICIAN DIMEDIATELY FOR TREATMENT AND TO ROLL OUT INVOLVEMENT OF THE ESOPHAGUS AND OTHER TISSUES.

- NOTES TO PHYSICIAN: 1) THE PRIMARY ACUTELY TOXIC INCREDIENT IS CONCENTRATED POTASSIUM HYDROXIDE (APPROXIMATELY 35%).
- 2) ANTICIPATED POTENTIAL LEARAGE VOLIME OF FOTASSIUM HYDROXIDE IS 2-20 ML, DEFENDING ON SIZE.
- 3) THIS MEDS DOES NOT INCLUDE OR ADDRESS THE SMALL BUTTON OR CELL BATTERIES WHICH CAN BE INGESTED.

ADDITIONAL INFORMATION:

REPLACES 2013.2

THIS MEDS COVERS DISCONTINUED PRODUCT NO. PC926

THE INFORMATION CONTAINED IN THE MATERIAL SAFETY DATA SHEET IS BASED ON DATA CONSIDERED TO BE ACCURATE, HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED RECARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE CHIATNED FROM THE SEE THEREOF.

* IF MULTIPLE INCREDIENTS, INCLUDE CAS NUMBERS FOR EACH

NA=NOT AVAITABLE

FOOTNOTES: NOT APPLICABLE

MSDS-5 (2/00)

GMET.祥: 2000.3

MSDS - Material Safety Data Sheet

Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Country:

Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

Issue Date: 02/19/2009 Supersedes Date: 02/11/2008 Contact: Robert Geer

Information Telephone Number: 704-684--181 1

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

Emergency Restrictions:

II. Hazards Identification:

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE. HARMFUL OR FATAL IF SWALLOWED. VAPOR TOXIC. EXCESSIVE INHALATION MAY BE FATAL. VAPORS MAY CAUSE FLASH FIRES. EYE IRRITANT. CONTENTS UNDER PRESSURE.

Level 3 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Inhalation, eye and skin contact.

Health Hazards (Acute and Chronic):

See signs and symptoms below.

Signs and Symptoms:

Eye Contact: Direct spray or vapors will irritate and may harm eyes Skin Contact: Product may cause irritation due to defatting of skin.

Inhalation: High concentrations of vapors may irritate nose and throat and cause symptoms of intoxication such as dizziness, nausea, headache,

or indigestion.

Ingestion: Gastrointestinal irritation, nausea, cramps, diarrhea. May be harmful or fatal if swallowed...

Medical Conditions Generally Aggravated by Exposure:

None Known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
Carbon dioxide	124-38-9	1.0 - 10.0	
Ethane, 1,1'-oxybis-	60-29-7	15.0 - 40.0	
Heptane	142-82-5	40.0 - 70.0	
Naphthenic Petroleum Distillate	64742-52-5	< 1.0	
Naphthenic Petroluem Oil	64742-53-6	< 1.0	

MSDS No.: M3815

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing

Inhalation: Remove to fresh air. If breathing becomes difficult, get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Foam, Dry Chemical (B-C), Carbon Dioxide

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Carbon dioxide, carbon monoxide, and various hydrocarbons

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Use with adequate ventilation and proper protective equipment.

Do not use or store near fire, sparks, open flame or heat sources. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst. Store in a cool, dry place, out of direct sunlight.

Storage Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

VIII. Exposure Controls/Personal Protection:

MSDS No.: M3815

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Ethane, 1,1'-oxybis-	400 ppm	400 ppm	Not Available
Heptane	500 ppm	400 ppm	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available
Naphthenic Petroluem Oil	5 mg/m3	5 mg/m3	Not Available

Engineering Controls:

See above Section for applicable exposure limits. Maintain adequate ventilation.

Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: N/D

Boiling Range: Not Available

Solubility In Water: Partial solubility

Flash Point: < 0°F

Odor Threshold: Not Available Vapor Density (AIR = 1): N/D. pH Range: Not Available

Decomposition Temp: Not Available

Lower Explosive Limit: N/D Specific Gravity (H20 = 1): 0.69 Other Information: % VOC: 93% Melting Point: N/A

Freezing Point: Not Available

Evaporation Rate (Butyl Acetate = 1): N/D

Flash Point Method: Calculated

Appearance and Odor: Clear liquid with solvent/ether odor.

Vapor Pressure (mm Hg.): N/D
Partition Coefficient: Not Available
Auto-Ignition Temp: Not Available
Upper Explosive Limit: N/D

X. Stability and Reactivity:

Stability:

Product is stable

Conditions to Avoid:

Avoid heat, sparks, and flames. Avoid incompatible materials.

Incompatible Materials:

Avoid contact with oxidizing agents.

Hazardous Decomposition Products:

Carbon Dioxide, Carbon Monoxide.

Possibility of Hazardous Reactions:

Will not occur.

XI. Toxicological Information:

N/D

MSDS No.: M3815

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

UN/NA#: Not Available

DOT Subsidiary Hazard Class: Not Available

Packing Group: Not Available

<u>Transportation Information:</u>
DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols, flammable, n.o.s.

UN number: UN1950

International:

ICAO/IATA

UN number: UN1950

Shipping Name: Aerosols, flammable, n.o.s.

Class: 2.1

IMDG

UN number: UN1950 Shipping Name: Aerosols

Class: 2.1 EmS: F-D, S-U

XV. Regulatory Information:

SARA 313 Reportable Chemicals.

None

USA TSCA: All components of this material are either exempt or listed on the US TSCA Inventory.

State RTK Chemicals: Heptane - 142-82-5 Diethyl ether 60-29-7



MSDS No.: M3815

XVI. Other Inform	iation:		
Chemical State: Chemical Type: Hazard Category:	X Liquid X Pure	Gas Solid	Health Reactivity
X Acute	Chronic Pressure	X Fire Reactive	Special Special
Additional Manufacture	er Warnings:		
	mage in case of spla	per ventilation. Contact lenses ash into eye. KEEP AWAY FR	OM Flammability
N/E: Not Established N/D: Not Determined N/A: Not Applicable N/AV: Not Available			Physical Hazard Pers. Protection

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0Reactivity = **HMIS RATING:** Health = /0 Flammability = 0Reactivity =

214109

(0915B)

#1004

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION

Product Name: OUICK & CLEAN LUSTRE-MIST Manufacturer's Name: HILLYARD INDUSTRIES

FÜRNITURE POLISH

Address:

302 North Fourth Street

Date Prepared: June 11, 2008

St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)

http://www.hillyard.com

SECTION II – INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity:

OTHER LIMITS

Common Name(s) CAS# OSHA PEL ACGIH TLV RECOMMENDED Water 7732-18-5 N.A. none none Silicone Emulsion Mixture not established not established N.A.

V.O.C. = 182 gm./l.; V.O.S. = 0.1 lbs./gal; VOS = less than 2%

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Specific Gravity ($H_2O = 1$): 25°C = 0.99 & 39°C = 0.99 **Boiling Point: 216°F**

Vapor Pressure (mm Hg.): 17.6 Percent Volatile by Volume (%): 95%

Vapor Density (AIR = 1): 0.6Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: complete Appearance and Odor: White, viscous liquid; lemon odor.

pH (concentrate): 5.5-6.5

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammable Limits: LEL = N.A. UEL = N.A. Flash point: None (T.C.C.)

Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical, Water Fog.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH

approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazards: Material may spatter if temperatures exceed boiling point.

SECTION V - PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): None known to polish manufacturer.

Hazardous Decomposition Products or Byproducts: None known to polish manufacturer.

Conditions to Avoid: N/A Hazardous Polymerization: Will not occur

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? N/A Skin? N/A Ingestion? N/A

HEALTH HAZARDS (1. Acute and 2. Chronic)

- 1. None known. (According to Primary Skin Irritation Test [FHSA] and Eye Irritation Test [FHSA] not an eye or skin irritant). FHSA oral studies on more concentrated product produced no toxicity at 5g./kg. Acute inhalation on more concentrated product - not toxic when administered at nominal concentration of 31.7 mg./l.(actual concentration = 15.8 mg./L sample was diluted 1:1 with deionized water.
- 2. None known to furniture polish manufacturer.

Page 2 of #1004 - Quick & Clean Lustre-Mist Furniture Polish

SECTION VI – HEALTH HAZARD DATA (CONTINUED)

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure: None known to polish manufacturer.

Medical Conditions Generally Aggravated by Exposure: None known to polish manufacturer.

Emergency and First Aid Procedures: If splashed into eyes flush with water for 15 minutes. Flush skin with water.

Ingestion: Drink large quantity of water; call physician.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Pick up with mop or wet vac and wash away with water.

Waste Disposal Method: Wash small quantities down sewer with large amount of water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. Large spills should be picked up with wet vac or absorbent material. Landfill or incinerate solids. Dispose of liquid per local, state and federal regulations.

Precautions To Be Taken In Handling And Storing: Freezing of product may rupture container. Product shelf life is best retained by storage at 45 - 100°F temperature.

Other Precautions: None known to manufacturer.

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type): None required if good ventilation is maintained.

Ventilation:

Local Exhaust = Not required

UN No.: Not applicable

Mechanical (General) = Suggested

Other = N.A.Special = N.A.

Hazard Class: Not applicable

Protective Gloves: None required

Eye Protection: None required

Other Protective Clothing or Equipment: None required.

Work / Hygienic Practices: Do not take internally; wash contaminated clothing and equipment before reuse.

SECTION IX – TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = No; IMCO = No; IATA = No.

Proper shipping name: Liquid Polish

Labels required: Not required DOT Exception: Not applicable

EPA Hazardous waste number / code: Not listed

Hazardous waste characteristics:

Ignitability = Not applicable; Corrosivity = Not applicable; Reactivity = Not applicable.

Limited Qty.: Not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

2/4/09

MATERIAL SAFETY DATA SHEET

EPA Reg. No. 8155-3-1658

EPA Est. No. 8155-OH-1



Section One »

Product and Company Information

#102 GERMICIDAL BOWL CLEANER Product Name:

Responsible Party: HILLYARD INDUSTRIES, INC.

302 North Fourth Street St. Joseph, MO 64501

Date: November 11, 2008 (version 3)

Product Information: 1-816-233-1321 (Ext. 8285)

Emergency: Chemtrec 1-800-424-9300

http://www.hillvard.com

Section Two	Composition	/Information on	Ingredients
_			

Component	Hazard	CAS#	OSHA PEL	ACGIH TLV	%
Hydrochloric Acid	Corrosive	7647-01-0	5 ppm(C)	5 ppm(C)	23 - 23.5
Water	N/A	7732-18-5	N/A	N/A	74 - 76
Alcohol Ethoxylate	Irritant	68131-39-5	N/A	N/A	0 - 1

Hazards Identification

Statement of Hazards: Danger. Causes eye and skin damage. Corrosive Liquid. Overexposure may cause severe irritation and burning of affected areas.

Primary Route of Exposure: Skin and eye contact are the principal routes of exposure to this product.

Skin Contact - Skin contact can cause severe irritation or burns with possible redness or swelling. Severity of action is highly dependent on contact time.

Eye Contact - Eye contact may cause severe irritation or burns. May cause permanent eye damage, if not promptly flushed with plenty of water.

Ingestion - If swallowed, this product may cause severe irritation or damage of mucosal linings of the mouth, throat, esophagus or stomach.

Inhalation - Inhalation can cause irritation and burning of respiratory passages.

Carcinogenicity: IARC - No NTP - No OSHA - No

ACCIH - No

First Aid Measures

Skin Contact: Immediately remove contaminated shoes and clothing. Wash with soap and plenty of water for 15 minutes. Get medical attention. Wash contaminated clothing before reuse.

Eye Contact: Immediate first aid is required to prevent eye damage. Flush immediately with water and remove contact lenses, if applicable. Then flush with large quantities of running water for 15 minutes. Hold eyelids apart during flushing to ensure complete rinsing of entire surface of eye and lids with water. Get medical attention immediately. Continue flushing with water if physician is not immediately available.

Ingestion: DO NOT induce vomiting. Rinse mouth with water. Then give 1-2 glasses of water or milk and call a physician or poison control center immediately. If vomiting occurs, keep head below hips to reduce risk of aspiration. Give water again. NEVER give anything by mouth to a person who is unconscious or convulsing. Get medical attention immediately.

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Medical Conditions Aggravated: No data is available that addresses medical conditions that are generally recognized as being aggravated by exposure to this product. Note to Physician: Treat exposed patients symptomatically.

Section Five

Fire Fighting Measures

Flash Point (Method): None

Flammable Limits: Not applicable.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide or foam extinguishing agents unless contraindicated by surrounding environment. Special Fire Fighting Procedures: Prevent human exposure to fire, smoke, fumes or products of combustion. Evacuate non-essential personnel from fire area. All ignition sources should be extinguished. Fire fighters should wear appropriate protective equipment, including self-contained breathing apparatus and impervious clothing. Keep containers cooled with water spray to prevent rupture from excess heat.

Fire and Explosion Hazards: No unusual fire or explosion hazards of this product are known.

Hazardous Products: Thermal decomposition of this product may generate oxides of carbon, nitrogen and hydrogen chloride.

Section Six

Accidental Release Measures

Caution: Ventilate area immediately. If spilled, floors may be extremely slippery. Wear appropriate protective gear to avoid skin or eye contact. Dike and contain spill with inert material (sand, clay). Transfer liquid and solids to separate containers for recovery or proper disposal. Keep spill out of storm sewers and open bodies of water. After removal, flush area with water. Follow good industrial hygiene practices. Wash thoroughly after clean up. If uncertain about proper disposal, contact your local waste disposal provider or the regional office of the Environmental Protection Agency for guidance.

Handling and Storage

Handling: Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Use product only according to label directions. If unsure about safe use, contact your supervisor immediately. Wash with soap and water after handling. Storage: Store in original container in a cool, dry, well-ventilated area away from sources of ignition. Store away from food or feed. Containers should be kept tightly closed when not in use. Keep in an area inaccessible to children.

Section Eight

Exposure Controls/Personal Protection

Personal Protective Equipment:

Respiratory: Respiratory protection is not expected to be necessary under normal conditions of use. Where exposure cannot be controlled by general or local ventilation, use appropriate respiratory protection to prevent over exposure. An approved acid gas respirator would be recommended.

Gloves: Use water impervious gloves, such as latex or neoprene rubber. Eye Protection: Chemical resistant goggles or face shield are recommended.

Other: Protective clothing (long sleeves, pants), eyewash, safety shower are always advisable when working with chemicals.

Ventilation: In applications where sprays or mists may be generated, proper ventilation in accordance with good industrial hygiene should be provided.



Product Name: #102 GERMICIDAL BOWL CLEANER

Date: November 11, 2008 (version 3)



Physical/Chemical Properties

Form Liquid

pH

< 1

< 1%

Color

White

Specific Gravity

1.112

Odor Pungent acid
Evaporation Rate > water

Solubility % VOC

Completely soluble Boiling

Boiling Point

190-212°F

Freezing Point

Not Established

Section Ten

Stability and Reactivity

Stability: This product is stable at ambient temperatures and atmospheric pressures. It is not self-reactive and has a shelf life of at least one year under sealed conditions. Conditions to avoid are temperatures above 130° F or below 32° F. Do not mix with other chemicals, Hazardous conditions may arise from improper mixing of chemicals. Mixing with bleach or other chlorine sources may generate potentially toxic gases.

Hazardous Decomposition Products: Thermal decomposition may generate toxic materials such as oxides of carbon, nitrogen, or hydrogen chloride.

Dangerous Polymerization: Will not occur. Conditions to avoid: None

Dangerous Reactions: May react with strong bases to give exothermic conditions. Reacts with bleach or other chlorine sources to generate toxic chlorine gas.

Section Eleven Toxicology Information

Acute Toxicity: This product has not been evaluated for its acute toxicology profile.

Chronic Toxicity: This product has not been evaluated for its chronic toxicology profile.

Carcinogenicity: This product does not contain a listed carcinogen from NTP, ACGIH or IARC.

Irritation: This product can be expected to be a skin and eye corrosive. No skin sensitization data is currently available.

Section Twelve Ecology Information

Ecotoxicity: The ecological toxicity of this product is not known.

Section Thirteen Disposal Considerations

Waste Disposal: Material that cannot be used according to label direction and is destined for disposal should be disposed of in accordance with all applicable regulations. Empty containers should be triple rinsed and offered for recycling or reconditioning, or disposed of in a sanitary landfill or for small containers (1 gallon or less), may be wrapped and discarded in trash. Waste generators are required to evaluate all waste material to determine if it is hazardous by characteristics or listing for compliance with RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than Federal regulations.

Section Fourteen Transport Information

DOT

Proper Shipping Name:

Consumer Commodity

Hazard Class:

ORM-D Packing Group:

П 154

ID Number:

UN3264

DOT Label:

ORM-D Emergency Guide No.:

.:

Shipping Emergency Phone No.:

CHEMTREC 1-800-424-9300

Section Fifteen Regulatory Information

FIFRA This is a registered product, EPA Reg. No. 8155-3-1658

Toxic Substances Control Act (TSCA): All of the components intentionally added to this product are listed on the on the U.S. EPA TSCA inventory. SARA Title III

Section 302: This product contains the following chemicals subject to SARA 302 reporting: None.

Section 311/312: This product is classified as an "immediate (acute) health hazard".

Section 313: *Chemicals marked with an asterisk in Section Two are subject to the reporting requirements for Section 313 of Title III of the Superfund Amendments and Reauthorization Act(SARA) of 1986 and 40CFR Part 372. However, if this product is utilized for routine janitorial maintenance, it is exempted from this section, as stated in paragraph B.3.b Activity Exemptions of the Form R instructions.

OSHA Hazard Communication Standard (29 CFR 1910.1200): This product is hazardous by definition of the Hazard Communication Standard.

NPCA Hazardous Material Identification System (HMIS Rating)

Health 3 Flammability 0 Reactivity 1 Personal Protective Eqpt. B

State Regulations

Pennsylvania/New Jersey/Massachusetts Right to Know

See "Section Two Composition" for listing of hazardous and top five ingredients present in concentration greater than 1%.

California Proposition 65: Components of this product present at a concentration that could require reporting under this statute are: None,

Section Sixteen Other Information

Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present unknown health hazards and should be used with caution. The information and recommendations contained herein are presented in good faith and are supplied pursuant to 29 CFR 1910.1200. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. It is the direct responsibility of the user to comply with all applicable Federal, State and local regulations governing the use and disposal of this material.

Prepared by: Regulatory Affairs Dept.





KANO LABORATORIES -- KROIL - PENETRATING OIL

MATERIAL SAFETY DATA SHEET

NSN: 9150008007997

Manufacturer's CAGE: 13868

Part No. Indicator: A

Part Number/Trade Name: KROIL

N4109

General Information

Item Name: PENETRATING OIL

Company's Name: KANO LABORATORIES INC Company's Street: 1000 S THOMPSON LANE

Company's City: NASHVILLE

Company's State: TN Company's Country: US

Company's Zip Code: 37211-2627 Company's Emerg Ph #: 615-833-4101 Company's Info Ph #: 615-833-4101 Record No. For Safety Entry: 001 Tot Safety Entries This Stk#: 001

Status: SMJ

Date MSDS Prepared: 08MAY92 Safety Data Review Date: 11MAY94 MSDS Preparer's Name: P R ZIMMERMAN

Preparer's Company: SAME MSDS Serial Number: BMBWB Hazard Characteristic Code: N/

Ingredients/Identity Information

Physical/Chemical Characteristics

Appearance And Odor: LIQUID, SLIGHT REDDISH COLOR, PLEASANT ODOR.

Boiling Point: 250F,121C Vapor Pressure (MM Hg/70 F): 3 Vapor Density (Air=1): N/A

Specific Gravity: .88

Evaporation Rate And Ref: <1(BUTYL ACETATE=1)

Solubility In Water: NIL

Percent Volatiles By Volume: 60

pH: 6.0

Fire and Explosion Hazard Data

Flash Point: 150F,66C Flash Point Method: COC Lower Explosive Limit: N/A

Upper Explosive Limit: N/A Extinguishing Media: CO*2, DRY CHEMICAL, FOAM.

Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED SCBA AND FULL PROTECTIVE EQUIPMENT (FP N). USUAL PROCEDURE FOR SOLVENTS. TREAT AS

COMBUSTIBLE. DO NOT USE WATER.

Unusual Fire And Expl Hazrds: NEVER USE WELDING OR CUTTING TORCH ON/NEAR

CANS/DRUMS. DO NOT MIX/STORE WITH STRONG OXIDANTS. STORE @ ROOM

TEMPERATURE.

Reactivity Data

Stability: YES





Cond To Avoid (Stability): HEAT, SPARKS, OPEN FLAME, STRONG OXIDANTS.

Materials To Avoid: STRONG OXIDIZING AGENTS.

Hazardous Decomp Products: THERMAL DECOMPOSITION IN PRESENCE OF AIR MAY YIELD CARBON MONOXIDE AND/OR CARBON DIOXIDE.

Hazardous Poly Occur: NO

Conditions To Avoid (Poly): NOT RELEVANT.

Health Hazard Data

LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.

Route Of Entry - Inhalation: YES

Route Of Entry - Skin: NO

Route Of Entry - Ingestion: YES

Health Haz Acute And Chronic: EYE: BURNING AND IRRITATION. SKIN: DRYNESS,

PROLONGED EXPOSURE MAY CAUSE DERMATITIS. INHAL: MAY CAUSE HEADACHE,

DIZZINESS, ANESTHESIA, NAUSEA AND UPPER RESPIRATORY IRRITATION. INGEST: MAY CAUSE LUNG IRRITATION, NAUSEA, VOMITING AND DIARRHEA. HARMFUL OR FATAL IF

SWALLOWED.

Carcinogenicity - NTP: NO

Carcinogenicity - IARC: NO

Carcinogenicity - OSHA: NO

Explanation Carcinogenicity: NOT RELEVANT.

Signs/Symptoms Of Overexp: SEE HEALTH HAZARDS.

Med Cond Aggravated By Exp: NONE SPECIFIED BY MANUFACTURER.

Emergency/First Aid Proc: EYE:IMMED FLUSH W/LG AMT OF H*20 FOR @ LST 15 MIN. SKIN:WASH W/SOAP/MILD H*20. APPLY SKIN CREAM. INHAL:REMOVE TO FRESH AIR. IF BRTHG IS DFCLT ADMINISTER O*2. IF BREATHING HAS STOPPED GIVE ARTF RESP. GET MED ATTN. INGEST: DO NOT INDUCE VOMIT, CALL PHYS IMMED. MINUTE AMOUNT ASPIRATED INTO LUNGS DURING INGEST MAY CAUSE SEVERE PULMONARY DAMAGE. DO NOT ADMINISTER EPINEPHRINE OR ADRENALINE.

DAMAGE. DO NOT ADMINISTER EPINEPHRINE OR ADRENALINE.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: WIPE UP IMMED WITH ABSORBENT RAGS, SWEEPING COMPOUND OR OTHER ABSORBENT MATERIAL, REMOVE OR EXTINGUISH ALL FLAMES AND SPARKS. DO NOT FLUSH INTO SEWER.

Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Method: BURY SATURATED ABSORBENT IN APPROVED LANDFILL. DISPOSE OF AS ANY COMBUSTION FUEL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

Precautions-Handling/Storing: KEEP AWAY FROM EXCESSIVE HEAT, SPARKS AND OPEN FLAME. DO NOT TAKE INTERNALLY. DO NOT LEAVE CONTR OPEN. STORE IN COOL AREA.

Other Precautions: USE WITH PROPER VENTILATION. WEARING CONTACT LENSES IS NOT ADVISABLE. IF SWALLOWED CAN ENTER INTO LUNGS AND MAY CAUSE CHEM PNEUM. DO NOT ADMINISTER EPINEPHRINE OR ADRENALIN. KEEP AWAY FROM CHILDREN AND ANIMALS. DO NOT PUNCTURE CONTR.

Control Measures

Respiratory Protection: NIOSH/MSHA APPROVED RESPIRATOR FOR VAPORS IF DESIRED.

NORMAL VENTILATION IS SUFFICIENT.

Protective Gloves: CHEMICALLY RESISTANT GLOVES.

Eye Protection: CHEMICAL WORKERS GOGGLE (FP N).

Other Protective Equipment: NONE NEEDED.

Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.

Suppl. Safety & Health Data: NONE SPECIFIED BY MANUFACTURER.

Transportation Data



Trans Data Review Date: 95165

DOT PSN Code: GJL

DOT Proper Shipping Name: FLAMMABLE LIQUIDS, N.O.S.

DOT Class: 3

DOT ID Number: UN1993 DOT Pack Group: III

DOT Label: FLAMMABLE LIQUID

IMO PSN Code: HIA

IMO Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. o *

IMO Regulations Page Number: 3345

IMO UN Number: 1993 IMO UN Class: 3.3

IMO Subsidiary Risk Label: - *

IATA PSN Code: MCA

IATA UN ID Number: 1993

IATA Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. *

IATA UN Class: 3

IATA Label: FLAMMABLE LIQUID

AFI PSN Code: MCA

AFI Prop. Shipping Name: FLAMMABLE LIQUIDS, N.O.S.

AFI Class: 3

AFI ID Number: UN1993 AFI Pack Group: III

AFI Label: FLAMMABLE LIQUID

AFI Basic Pac Ref: 7-7

Disposal Data

Label Data

Label Required: YES

Technical Review Date: 11MAY94

Label Date: 11MAY94
Label Status: G
Common Name: KROIL
Chronic Hazard: YES
Signal Word: WARNING!

Acute Health Hazard-Moderate: X

Contact Hazard-Slight: X
Fire Hazard-Moderate: X
Reactivity Hazard-None: X

Special Hazard Precautions: COMBUSTIBLE. ACUTE: EYES: BURNING AND IRRITATION. SKIN: DERMATITIS. INHAL: IRRITATION, HEADACHE, DIZZINESS, NAUSEA. INGEST: IRRITATION, NAUSEA, VOMITING, DIARRHEA. HARMFUL/FATAL IF SWALLOWED. CHRONIC: ANIMAL STUDIES HAVE CLEARLY DEMONSTRATED DOSE-RELATED ADVERSE EFFECTS ON CNS, BLOOD FORMING TISSUES, BLOOD, KIDNEYS & LIVER ASSOC

W/ADMIN OF ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE).

Protect Eye: Y Protect Skin: Y

Protect Respiratory: Y

Label Name: KANO LABORATORIES INC Label Street: 1000 S THOMPSON LANE

Label City: NASHVILLE

Label State: TN

Label Zip Code: 37211-2627

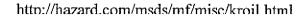
Label Country: US

Label Emergency Number: 15-833-4101

1/16/2009



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2/4/09

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067 TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 01 of 06

Permatex(R) Battery Protector and Sealer 80370

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name:

Permatex(R) Battery Protector and Sealer

Item No.:

80370

Part No.:

SA-9

Product Type:

Aerosol Sealant and Protectant

2. COMPOSITION, INFORMATION ON INGREDIENTS

CAS No.	og
108-88-3 Proprietary	30-40 10-20
64742-57-0	10-20
106-97-8	5-20
75-28-5	5-20
74-98-6	5-20
111-76-2	1-10
71-55-6	1-10
64742-52-5	1-10
	108-88-3 Proprietary 64742-57-0 106-97-8 75-28-5 74-98-6 111-76-2 71-55-6

^{*} This component is listed as a SARA Section 313 Toxic Chemical.

Ingredients which have exposure limits

Exposure Limits (TWA) Ingredients	ACGIH (TLV)	OSHA (PEL)	OTHER
TOLUENE	50 ppm skin 188 mg/M3 skin		None
BUTANE	800 ppm TWA 1900mg/M3	800 ppm TWA	None
PROPANE	Asphyxiant	1000 ppm 1800 mg/m3	None
2-BUTOXYETHANOL	25 ppm TWA skin 121mg/m3 skin	50 ppm TWA skin 120mg/m3 skin	None
ETHANE, 1,1,1-TRICHLORO~	350 ppm TWA . 1910 mg/m3	350.ppm TWA 1900 mg/m3	None
Mineral oil	5 mg/m3 mist	5 mg/m3 mist	5 mg/m3 mist
Exposure Limits (STEL)	ACGIH	OSHA	
Ingredients	(TLV)	(PEL)	
TOLUENE	None	150 ppm 560mg/M3	
ETHANE, 1,1,1-TRICHLORO-	450 ppm	450 ppm	
	2460 mg/m3	2450 mg/m3	

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067 TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 02 of 06

Product Name:

Permatex(R) Battery Protector and Sealer

Item No.: 80370

2. COMPOSITION, INFORMATION ON INGREDIENTS

(continued)

Mineral oil

10 mg/m3 mist None

3. HAZARDS IDENTIFICATION

Toxicity:

Skin and eye irritant. May irritate respiratory tract. Aspiration hazard if swallowed. May cause dizziness or narcosis in high vapor concentrations

Will cause defatting of skin.

Long term exposure to high concentrations of vapor may cause lung, liver, or kidney damage. The solvents listed have been reported to affect the

central nervous system.

May cause cardiac abnormalities.

Overexposure to toluene may cause nasal and brain damage. 2-Butoxyethanol may cause corneal injury blood abnormalities, may be absorbed through the skin with toxic effects, and may cause damage to

spleen and testes.

Primary Routes of Entry:

Signs and symptoms

of Exposure:

Skin absorption, ingestion, inhalation

Inhalation: Difficulty in breathing.

Skin: Redness.

Ingestion: Vomiting.

Existing Conditions

Aggravated by Exposure:

Heart disease, respiratory disorders.

Toluene may also aggravate central nervous system

diseases and alcoholism.

	Literature Referenced	Car	cinog	en
Ingredients	Target Organ and Other Health Effects	NTP	IARC	OSHA
TOLUENE	AC4 CAR CNS DEV IRR	NO	NO	NO
Grease mixture	No Data	ИО	NO	NO
Residual oils (petroleu	m),			
hydrotreated	No Data	NO	NO	NO
BUTANE	CAR CNS IRR	NO	МО	NO
ISOBUTANE	CAR CNS LUN	NO	NO	NO
PROPANE	CAR CNS IRR	NO	NO	NO
2-BUTOXYETHANOL	BLO CNS IRR	NO	NO	NO
ETHANE, 1,1,1-TRICHLOR	O- AC4 CAR CNS IRR LIV	NO	N/A	NO
Mineral oil	IRR	NO	NO	NO



Abbreviations

N/A Not Applicable

BLO Blood

CNS Central nervous system

AC4 ACGIH-Unclassifiable as human carc.

CAR Cardiac

DEV Developmental

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067 TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 03 of 06

Product Name:

Permatex(R) Battery Protector and Sealer

Item No.: 80370

3. HAZARDS IDENTIFICATION

(continued)

IRR Irritant
LUN Lung

LIV Liver

oon bung

4. FIRST AID MEASURES

Ingestion:

Do not induce vomiting. Keep individual calm.

Obtain medical attention. Gastric lavage.

Inhalation:

Remove to fresh air. If symptoms persist, obtain

medical attention. Give oxygen.

Skin Contact:

Wash with soap and water.

Eye Contact:

Flush with water for at least 15 minutes. Obtain

medical attention.

Never administer adrenalin following overexposure.

5. FIRE FIGHTING MEASURES

Flash Point:

-142°F

Method: Tag Closed Cup

Recommended

Extinguishing Agents:

Carbon dioxide, water fog, dry chemical

Hazardous Products formed

by Fire or Thermal Decomp Carbon dioxide, water, halogen acids, phosgene.

Unusual Fire or

Explosion Hazards:

Heated cans may rupture.

Explosive Limits:

(% by volume in air)Lower 1.8

(% by volume in air)Upper 9.5%

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken in case

of spill or leak:

Remove ignition sources. Maintain adequate

ventilation. Soak up liquid in an inert absorbent

and store in a closed container until disposal.

HANDLING AND STORAGE

Safe Storage:

Store away from heat, spark or open flame.

Store below 120°F.

Handling:

(Contact Loctite Customer Service 1-800-243-4874 for shelf Life information) Avoid prolonged breathing of vapor. Keep away

> from eyes. Avoid prolonged skin contact. Keep away from heat, sparks, or open flame. Do not smoke while using. Wash hands after use. When spraying more than one half can or more than

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067 TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 04 of 06

Product Name:

Permatex(R) Battery Protector and Sealer 80370

Item No.:

HANDLING AND STORAGE

(continued)

one can consecutively, use NIOSH/MSA approved respirator.

EXPOSURE CONTROLS, PERSONAL PROTECTION

Eyes:

Safety glasses or goggles.

Skin:

Rubber or plastic gloves. Long sleeves and long

pants.

Ventilation:

Provide adequate local ventilation to maintain

vapor concentration below TLV.

Use self contained breathing apparatus when vapor

concentration exceeds TLV.

See Section 2 for Exposure Limits.

61.3%; 490 grams per liter (calculated)

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Purple liquid

Odor:

Solvent

Boiling Point:

-40°F to 232°F

: Hq Solubility in Water: Does not apply Negligible

Specific Gravity

0.8

Volatile Organic Compound

(EPA Method 24)

57 psig at 70°F

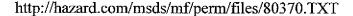
Vapor Pressure: Vapor Density:

4.0

Evaporation Rate

(Ether = 1)

Faster than butyl acetate



10. STABILITY AND REACTIVITY

Stability:

Stable

Hazardous Polymerization: Will not occur

Not available

Incompatibility:

Strong oxidizers; active metals, strong alkalies,

reactive metals, zinc, sodium, potassium.

Conditions to Avoid:

Hazardous Decomposition

Products (non-thermal): None

TOXICOLOGICAL INFORMATION

See Section 3.

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067 TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 05 of 06

Product Name:

Permatex(R) Battery Protector and Sealer

Item No.:

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended methods of

disposal:

Do not puncture or incinerate cans. Give cans to

licensed disposal service equipped for safe

disposal of aerosol containers.

EPA Hazardous Waste

Number

D001/F002 - Hazardous waste per 40CFR 261.21 and

261.31/1,1,1-Trichloroethane

TRANSPORTATION INFORMATION

DOT (49 CFR 172)

Domestic Ground Transport

Proper Shipping Name:

Consumer Commodity

Hazard Class or

Division:

ORM-D

Identification Number: Marine Pollutant:

None

None

Proper Shipping Name:

Aerosols, flammable, n.o.s. containing

substances in Division 6.1, Packing Group III

Class or Division:

Division 2.1 Subsidiary Risk 6.1

UN or ID Number:

UN 1950



15. REGULATORY INFORMATION

CA Proposition 65:

WARNING: This product contains a chemcial known to

the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

Estimated NFPA(R) Code:

Health Hazard: 2
Fire Hazard: 4
Reactivity Hazard: 0

Specific Hazard:

Does not apply

Estimated HMIS(R) Code:

Health Hazard: 2
Flammability Hazard: 4
Reactivity Hazards: 0

Personal Protection:

See Section 8.

NFPA is a registered trademark of the National Fire Protection Assn.

PERMATEX INDUSTRIAL CORPORATION

07/02/97

ROCKY HILL, CONNECTICUT 06067 TELEPHONE: (860) 571-5100

MATERIAL SAFETY DATA SHEET

Page 06 of 06

Product Name:

Permatex(R) Battery Protector and Sealer

Item No.: 80370

16. OTHER INFORMATION

(continued)

HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By:

Stephen Repetto

Title:

Research Chemist, Health and Safety

Company:

Loctite Corp., 1001 Tr Br Cr, Rocky Hill CT 06067

(24hr.) Phone:

(860) 571-5100

Revision Date:

April 15, 1997

Revision: 0005



MATERIAL SAFETY DATA

PRODUCT NAME: Roberts Earthbond 7200 Solvent, Free Cove Base Adhesive

PRODUCT CODE: 7200C

HMIS CODES: HFRP 100B

SECTION 1 - MANUFACTURER IDENTIFICATION

QEP ROBERTS CORP. MANUFACTURER'S NAME:

ADDRESS: 300 Cross Plains Blvd., Dalton, GA 30721

EMERGENCY PHONE: (800)424-9300 (Chemtrec)

DATE REVISED:

04/25/2006

INFORMATION PHONE: (706) 277-5294

NAME OF PREPARER: M. King

SECTION 11 - HAZARDOUS INGREDIENTS/SARA 111 INFORMATION

No reportable quantities of hazardous ingredients are present per OSHA regulations: 29 CFR 1910-1200. No toxic chemical(s) subject to reporting requirements of Section 313 of Title 111 and of 40 CFR 372 are present.

SECTION 111 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: VAPOR DENSITY: 212° F Heavier than air

SPECIFIC GRAVITY (H20=1): 1.14 EVAPORATION RATE: Same as water

COATING V.O.C.:

0 grams/liter calculated

pH: 9.0 - 9.5

SOLUBILITY IN WATER:

Misable in water. Off white heavy paste with a very mild odor. **PERCENT VOLATILE: 43.5**

APPEARANCE AND ODOR: SECTION IV - FIRE AND EXPLOSION HAZARD DATA N/A

FLASH POINT:

METHOD USED: N/A

FLAMMABLE LIMITS IN AIR BY VOLUME -

LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: Foam, CO2, Dry Chemical, Water Spray

SPECIFIC FIREFIGHTING PROCEDURES: Wear self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

SECTION V - REACTIVITY DATA

STABILITY:

Stable

(Materials to avoid): Strong oxidizers and caustics.

CONDITIONS TO AVOID: Excessive Heat

INCOMPATIBILITY: HAZARDOUS DECOMPOSITION OR BYPRODUCTS: Combustion products: Oxides of carbon, water, and organic compounds of unknown structure.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION VI - HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Normally none; may cause slight irritation of respiratory track.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Contact with eyes and skin may result in slight imitation.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: None known.

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: Potential G.I. blockage. Not a likely route of entry under normal handling conditions.

HEALTH HAZARDS (Acute/Chronic): CARCINOGENICITY: NTP? No.

Acute: May cause mild skin irritation. IARC MONOGRAPHS? No

Chronic: None known. OSHA REGULATED? No

This product contains no carcinogens as listed by NTP, IARC and OSHA.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing skin disorders.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: Flush with large amounts of water for 15 minutes. See physician if irritation develops.

SKIN: Wash with soap and water. Consult physician if imitation develops.

INGESTION: Do not induce vomiting. If victim is conscious, dilute with water. Contact physician immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spill by diking to prevent spreading. Use absorbent material to collect and contain for salvage or

disposal.

WASTE DISPOSAL METHOD: Discarded spift residue may be incinerated. Do not incinerate sealed containers. Dispose according to Federal, State and local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep containers from excessive heat and freezing. Keep containers tightly closed when not in use. Keep out of reach

of children. Protect against physical damage. Store in a cool, dry place (50F - 90F). OTHER PRECAUTIONS: None.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: None should be required. Use in a well ventilated area.

PROTECTIVE GLOVES: Rubber Gloves. EYE PROTECTION: Goggles

VENTILATION: Use local exhaust. Do not use closed air circulating system. Open window and doors if necessary. OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None.

WORK/HYGIENE PRACTICES: Standard hygiene and safe handling procedures are believed to be generally applicable.

SECTION IX REGULATORY INFORMATION

Hazardous Waste 40CFR261: No. Hazardous Waste Number:

Hazardous Substance Superfund: No.

All components are in TSCA inventory

RO (lbs):

SECTION X SHIPPING DATA

D.O.T. Proper shipping Name (49CFR172.101-102): None

Hazardous Substance (49CFR CERCLA List): No.

RO: NA

D.O.T. Hazard Classification (49CFR172.101-102):

Primary: None.

Secondary: None.

D.O.T. Labels required (49CFR172.101-102): None.

D.O.T. Placards Required (49CFR172.504): None.

Bill of Lading Description: Adhesive, NOS

Bill of Lading Description: Adhesive, NOS UN/NA Code: NA

SECTION IX - DISCLAIMER: The information accumulated herein is believed to be accurate, but is not warranted to be whether originating with the company or not. Each user should review and determine for themselves, the applicability of the information in the specific context of the intended use.

KEEP OUT OF REACH OF CHILDREN

Manufactured by: QEP ROBERTS CORP.



MSDS - Material Safety Data Sheet

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Country:

Contact: Robert Geer

Information Telephone Number: 704-684-181 1

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

Emergency Restrictions:

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

Issue Date: 01/07/2009 Supersedes Date: 02/27/2008

II. Hazards Identification:

EMERGENCY OVERVIEW

Flammable. Harmful or fatal if swallowed. Eye and Skin Irritant. Contents under Pressure.

Level 3 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

ENTERED

WAR 192009

Potential Health Effects

Route(s) of Entry:

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See Signs and Symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.

Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.

Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis...

Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

N/D

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
1,2,4-Trimethylbenzene	95-63-6	3.0 - 7.0	
Aliphatic Hydrocarbon Solvent	8052-41-3	40.0 - 70.0	
Carbon dioxide	124-38-9	3.0 - 4.0	
Dimethyl Polysiloxane	63148-62-9	3.0 - 7.0	
Ethylbenzene	100-41-4	0.1 - 1.0	
łydrocarbon Fluid	64742-47-8	10.0 - 30.0	
ow Odor Base Solvent	Proprietary	10.0 - 30.0	
Mesitylene	108-67-8	3.0 - 7.0	
Naphthenic Petroleum Distillate	64742-52-5	3.0 - 7.0	
Xylene (mixed isomers)	1330-20-7	1.0 - 5.0	

MSDS No.: M914

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing

Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured. Run off to sewer may create fire or explosion hazard.. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Handling Precautions:

Handling: Use with adequate ventilation and proper protective equipment.

Do not use near fire, sparks, or flame. Do not puncture or incinerate container.

Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

Storage Precautions:

Flammable. Store in cool, well ventilated area below 120°F away from heat sources, oxidizers and acids. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.



MSDS No.: M914

VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Aliphatic Hydrocarbon Solvent	100 ppm	100 ppm	Not Available
Dimethyl Polysiloxane	N/E	N/E	Not Available
Low Odor Base Solvent	N/E	N/E	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
1,2,4-Trimethylbenzene	N/E	25 ppm	Not Available
Mesitylene	N/A	N/A	Not Available
Xylene (mixed isomers)	100 ppm	100 ppm	Not Available
Ethylbenzene	100 ppm	100 ppm	Not Available
Hydrocarbon Fluid	5 mg/m3	5 mg/m3	Not Available

Engineering Controls:

See Section above for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 310°F Boiling Range: N/D

Solubility In Water: Insoluble

Flash Point: 125°F Odor Threshold: N/D

Vapor Density (AIR = 1): N/D

pH Range: N/A

Decomposition Temp: N/D

Lower Explosive Limit: N/D

Specific Gravity (H20 = 1): 0.81

Other Information: % VOC: 58.17%

Melting Point: N/A Freezing Point: N/D

Evaporation Rate (Butyl Acetate = 1): N/D

Flash Point Method: TCC

Appearance and Odor: Clear to slight yellow liquid with

petroleum odor.

Vapor Pressure (mm Hg.): N/D
Partition Coefficient: N/D
Auto-Ignition Temp: N/D
Upper Explosive Limit: N/D

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

See Incompatible Materials below.

incompatible Materials:

Oxidizing agents and acids.

Hazardous Decomposition Products:

Normal products of combustion, carbon dioxide, smoke and Nitrogen and Sulfur Oxides

Possibility of Hazardous Reactions:

Will not occur

MSDS No.: M914

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

UN/NA#: Not Available

Transportation Information: DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

DOT Subsidiary Hazard Class: Not Available

Packing Group: Not Available

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols

Class: 2.1

UN number: UN1950

International:

ICAO/IATA

UN number: UN1950 Shipping Name: Aerosofs

Class: 2.1

IMDG

UN number: UN1950 Shipping Name: Aerosols

Class: 2.1 EmS: F-D, S-U

XV. Regulatory Information:

SARA 313 Reportable Chemicals. 1,2,4, Trimethylbenzene 95-63-6 Xylene 1330-20-7

Ethylbenzene 100-41-4

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

State RTK Chemicals Aliphatic hydrocarbon solvent 8052-41-3 Xylene 1330-20-7 Ethylbenzene 100-41-4



MSDS No.: M914

XVI. Other Information:				
Chemical Type:	Pure	Mixture	2	
Hazard Category:			Health Reactivity	
X Acute	Chronic	X Fire	2 0	
_	X Pressure	Reactive	Special	
Additional Manufacture	er Warnings:		V300-6000-00-00-00-00-00-00-00-00-00-00-00	
	mage in case of sp	per ventilation. Contact lenses ash into eye. KEEP AWAY FR	OM 2 Health 2 Flammability	
N/E: Not Established			 Physical Hazard 	
N/D: Not Determined			▲ Pers. Protection	

Additional Product Information:

N/A: Not Applicable N/AV: Not Available

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

MSDS - Material Safety Data Sheet Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY

Address: 600 RADIATOR ROAD

City, ST Zip: INDIAN TRAIL, NC 28079

Country:

Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

Issue Date: 02/19/2009 Supersedes Date: 02/11/2008 Contact: Robert Geer

Information Telephone Number: 704-684-181 1

Emergency Contact: Rocky Mountain Poision Control Center

Emergency Telephone Number: 303-623-5716

Emergency Restrictions:

ENTERED MAR 192009

II. Hazards Identification:

EMERGENCY OVERVIEW

DANGER: EXTREMELY FLAMMABLE. HARMFUL OR FATAL IF SWALLOWED. VAPOR TOXIC. EXCESSIVE INHALATION MAY BE FATAL. VAPORS MAY CAUSE FLASH FIRES. EYE IRRITANT. CONTENTS UNDER PRESSURE.

Level 3 Aerosol

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Route(s) of Entry:

Inhalation, eye and skin contact.

Health Hazards (Acute and Chronic):

See signs and symptoms below.

Signs and Symptoms:

Eye Contact: Direct spray or vapors will irritate and may harm eyes Skin Contact: Product may cause irritation due to defatting of skin.

Inhalation: High concentrations of vapors may irritate nose and throat and cause symptoms of intoxication such as dizziness, nausea, headache, or indigestion.

Ingestion: Gastrointestinal irritation, nausea, cramps, diarrhea. May be harmful or fatal if swallowed...

Medical Conditions Generally Aggravated by Exposure:

None Known

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
Carbon dioxide	124-38-9	1.0 - 10.0	
Ethane, 1,1'-oxybis-	60-29-7	15.0 - 40.0	
Heptane	142-82-5	40.0 - 70.0	
Naphthenic Petroleum Distillate	64742-52-5	< 1.0	
Naphthenic Petroluem Oil	64742-53-6	< 1.0	

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MSDS - Material Safety Data Sheet Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eve Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.

Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing

before reuse.

inhalation: Remove to fresh air. If breathing becomes difficult get prompt medical attention.

Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Foam, Dry Chemical (B-C), Carbon Dioxide

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Carbon dioxide, carbon monoxide, and various hydrocarbons

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occurred. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occurred.

VII. Handling and Storage:

Handling Precautions:

Use with adequate ventilation and proper protective equipment.

Do not use or store near fire, sparks, open flame or heat sources. Do not puncture or incinerate container. Exposure to temperatures above 120° may cause container to vent, rupture, or burst. Store in a cool, dry place, out of direct sunlight.

Storage Precautions:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

VIII. Exposure Controls/Personal Protection:

MSDS - Material Safety Data Sheet Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Ethane, 1,1'-oxybis-	400 ppm	400 ppm	Not Available
Heptane	500 ppm	490 ppm	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available
Naphthenic Petroluem Oil	5 mg/m3	5 mg/m3	Not Available

Engineering Controls:

See above Section for applicable exposure limits. Maintain adequate ventilation.

Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use approved air line type respirator or hood. A self-contained breathing apparatus is required for vapor concentrations above TLV limits

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: N/D

Boiling Range: Not Available

Solubility in Water: Partial solubility

Flash Point: < 0°F

Odor Threshold: Not Available Vapor Density (AIR = 1): N/D. pH Range: Not Available

Decomposition Temp: Not Available

Lower Explosive Limit: N/D Specific Gravity (H20 = 1): 0.69 Other Information: % VOC: 93% Melting Point: N/A

Freezing Point: Not Available

Evaporation Rate (Butyl Acetate = 1): N/D

Flash Point Method: Calculated

Appearance and Odor: Clear liquid with solvent/ether odor.

Vapor Pressure (mm Hg.): N/D
Partition Coefficient: Not Available
Auto-Ignition Temp: Not Available
Upper Explosive Limit: N/D

X. Stability and Reactivity:

Stability:

Product is stable

Conditions to Avoid:

Avoid heat, sparks, and flames. Avoid incompatible materials.

Incompatible Materials:

Avoid contact with oxidizing agents.

Hazardous Decomposition Products:

Carbon Dioxide, Carbon Monoxide.

Possibility of Hazardous Reactions:

Will not occur.

XI. Toxicological Information:

N/D

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MSDS - Material Safety Data Sheet Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in aerosol recycling centers when empty. Before offering for recycling, empty the can by using the product according to the label. DO NOT PUNCTURE! If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations.

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

UN/NA#: Not Available

Transportation Information: DOT Hazard Class: ORM-D

Shipping Name: Consumer Commodity

DOT Subsidiary Hazard Class: Not Available

Packing Group: Not Available

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)

Shipping Name: Aerosols, flammable, n.o.s.

UN number: UN1950

International:

ICAO/IATA

UN number: UN1950

Shipping Name: Aerosols, flammable, n.o.s.

Class: 2.1

IMDG

UN number: UN1950 Shipping Name: Aerosols

Class: 2.1 EmS: F-D, S-U

XV. Regulatory Information:

SARA 313 Reportable Chemicals.

None

USA TSCA: All components of this material are either exempt or listed on the US TSCA Inventory.

State RTK Chemicals: Heptane - 142-82-5 Diethyl ether 60-29-7

MSDS - Material Safety Data Sheet Product Name: THRUST QUICK STARTING FLUID

MSDS No.: M3815

XVI. Other Inform	ation:	i riveriti e manuse monte e mo	на при на принципа на прин		
Chemical State:	X Liquid	Gas	Solid	NFPA	
Chemical Type:	X Pure	Mixture	Newspare	Health Reactivity	
Hazard Category:					
X Acute	Chronic	X Fire			
—	X Pressure	Reactive		Specjal	
Additional Manufacture	r Warnings:			identification in the control of	
Do not used in confine	ed area without prop	er ventilation. Co	intact lenses	2 Health	
may cause further dan	nage in case of spla			T FIECHTI	
CHILDREN AND ANIM	MALS!			4 Flemmability	
N/E: Not Established				 Physical Hazard 	
N/D: Not Determined				Pers. Protection	
N/A: Not Applicable				H Pers, Protection	

Additional Product Information:

N/AV: Not Available

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

Serial No.: RAY/4566



Issue No: 5

Effective Date: October 1994

PRODUCT IDENTIFICATION

THIS MSDS IS FURNISHED FOR A GROUP OF PRODUCTS WHICH HAVE SIMILAR PROPERTIES DURING NORMAL CONDITIONS OF USE, BUT WHICH MAY EMIT DISSIMILAR THERMAL DEGRADATION BYPRODUCTS IF OVERHEATED. FOR MORE SPECIFIC INFORMATION, PLEASE CALL (650) 361-4907.

Product Name: Heat-Shrinkable Polymeric Products

(excluding Solder Sleeves - see separate MSDS)

Manufacturer: Raychem Corporation

300 Constitution Drive Menio Park, CA 94025 Chemical Name: Not applicable, mixture

CAS #: Not applicable, mixture

DOT Proper Shipping Name: Not regulated DOT Identification No.: Not regulated DOT Hazard Classification: Not regulated

TSCA Inventory Status: Exempt

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE or ACCIDENT Call CHEMTREC - Day or Night - 1-800-424-9300 Toll free in the continental U.S., Hawaii, Puerto Rico, Canada, Alaska or Virgin Islands. For calls originating elsewhere: (703) 527-3887 (collect calls accepted)

For non-emergency health and safety information, call: (650) 361-4907

HAZARDOUS INGREDIENTS

Heat-Shrinkable Polymeric Products are not hazardous during proper installation, but may emit hazardous thermal decomposition and combustion byproducts if overheated to degradation. See "Thermal Degradation and Combustion Byproduct" section of this MSDS for more specific information. Base polymer materials include polyethylene and olefin copolymers, fluoropolymers, chloropolymers, polyamides, polyesters, and silicones. Heat-shrinkable products may be coated with or used in conjunction with adhesives/mastics which are based on olefin copolymers or polyamides. Larger products may be coated on their exterior with an acrylic-based temperature-sensitive paint which indicates to the installer when sufficient heat has been applied to cause the adhesive to flow.

PRODUCT APPLICATIONS

Typical uses of heat-shrinkable polymeric products include primary electrical insulation, EMI/RFI shielding, cable jacketing and repair, strain relief, component encapsulation, waterproofing, cable identification, corrosion protection, environmental/mechanical protection, and cable joining, splicing, and termination in applications ranging from electrical power generation and distribution to electrical equipment manufacture.

PHYSICAL PROPERTIES

Appearance and Odor: Plastic tubing and molded parts in a variety of shapes, sizes and colors. No odor.

Boiling Point: Not applicable Vapor Pressure (mm Hg @ 20°C): Not applicable

Volatility (% by Volume): Not applicable Vapor Density: Not applicable

Specific Gravity (Water=1): Not applicable Evaporation Rate: Not applicable

Flash Point (°F)/Method: Not applicable Solubility In Water (%): Insoluble

Flammable Limits in Air (volume %): Lower Not applicable Upper Not applicable

Issue No: 5 Effective Date: October 1994 Serial No: RAY/4566
Page 2 of 4



Exposure Limits: There are no established exposure limits for polymer mixtures.

Health Effects/Symptoms of Exposure:

Proper installation of this product creates no known acute or chronic health hazards.

Acute (Short-Term Exposure):

Eye Contact:

Contact with molten material may cause thermal burns.

Skin Contact:

This product is not expected to be a skin irritant. Contact with the molten material may cause

thermal burns. No harmful effects are expected from skin absorption of this product.

Ingestion (Swallowing): Ingestion of this product is highly unlikely. There is insufficient information available on this

material to predict the effects from ingestion.

Inhalation (Breathing): In common with most organic materials, thermal degradation and combustion byproducts may be

toxic and should not be inhaled. (See Comments below and the Thermal Degradation and

Combustion Byproducts Section for more specific information.)

Chronic (Long-Term Exposure):

None of the ingredients to which users may be exposed and which are present at equal to or greater than 0.1% of the

product, are listed by OSHA, NTP, or IARC as suspect carcinogens.

Comments: Overheating the product to charring or burning may produce vapors that may cause eye, skin, nose and throat irritation. Persons with pre-existing eye, skin, or respiratory disorders (e.g., asthma conditions) may be more

susceptible to the effects of these vapors.

STORAGE, HANDLING, AND PREVENTATIVE MEASURES

Stability at room temperature: This product is stable under normal conditions.

Conditions to Avoid: Avoid overheating of product.

Incompatibilities (Materials to Avoid): None known.

Hazardous Polymerization: Will not occur. No known polymerization conditions to avoid.

Thermal Degradation and Combustion Byproducts: In common with most organic materials, degradation and combustion byproducts may be toxic and should not be inhaled. Thermal degradation is not significant at temperatures achieved during proper installation, as directed by product installation guides. At temperatures higher than those recommended for proper installation, most significantly if the product burns, the thermal degradation and combustion byproducts will depend on the base polymer used, and may include, but are not limited to, carbon monoxide, carbon dioxide, aldehydes, acetic acid, low molecular weight hydrocarbons, silicon dioxide, hydrogen chloride, hydrogen fluoride, hydrogen bromide, fluoro-olefins, and oxides of nitrogen, phosphorus, and sulfur.

Effective Date: October 1994

Issue No. 5

ven off if the product is heated to decomposition as shown by a darkaning and harmonic of the sle Jung a thermochromic temperature indicator, discontinue heating after the color changes from reduction. Heat-resistant gloves are required if hot products are handled often involving of the sle Jiven off if the product is heated to decomposition, as shown by a darkening and browning of the immediate work area. Wash hands hafter eating drinking or empling.

Handling the product in the immediate work area. Wash hands before eating, drinking or smoking. Co/or/er tobacco in the immediate work area. Wash hands before eating, drinking or shioking.

Color/er tobacco in the immediate work area. Wash hands before eating, drinking or shioking.

Color/er tobacco in the immediate work area. Wash hands before eating, drinking or shioking.

Color/er tobacco in the immediate work area. Wash hands before eating, drinking or shioking.

Color/er tobacco in the immediate work area. Wash hands before eating, drinking or shioking. A void heating products beyond temperatures required for normal installation. See installation instructions the circumstances. Allow any vapors to disperse and ventilate before continuing any tunes which may be Orbach circumstances. If product chars or burns, immediately stop heating. Avoid inhaling any fumes vapors to disperse and ventilate before continuing work in the area.

gi_{ln} accordance with good industrial hygiene practice, ensure adequate ventilation during installation.

aended.

Jory Protection: If installation occurs in a confined, unventilated area, NIOSH/MSHA-approved respirators are

ofective Clothing: OSHA, ANSI, or NIOSH guidelines should be followed. If there is a danger of molten material contacting the skin or eyes, use eye/face protection and heat resistant gloves. If it is necessary to handle grossly overheated or fire-damaged contact with potentially corrosive inorganic acid residues. products, wear natural rubber gloves to prevent possible contact with potentially corrosive inorganic acid residues. Transportation: These products are non-hazardous under Department of Transportation Regulations 49, CFR Section 171.8, April 24. Because there are no applicable shipping regulations for these products, labels are not required on Transportation: These products are non-hazardous under Department of Transportation Regulations 49, CFR Section 171.8, outside shipping container for these products and all products may be shipped through the U.S. Postal Services.

IATA, IMO, and AFR 71-4. Because there are no applicable shipping regulations for these products and all products may be shipped through the U.S. Postal Services. iferature for identification of halogen-containing products.

Disposal: Dispose in accordance with all local, state and federal regulations. If there are local regulations covering the controlled materials, then all balogen-containing products will be subject to such regulations. Refer to the product Disposal: Dispose in accordance with all local, state and federal regulations. If there are local regulations covering the controlled interaction of halogen-containing products. Refer to the product of Installation: Follow appropriate Raychem installation instructions and application guides to ensure that installation is performed electrical equipment are observed. When Installation: Follow appropriate Raychem installation instructions and application guides to ensure that installation is performed using IR (infrared) heating devices, observe specific instructions. Do not touch hot surfaces on installation equipment. properly. Ensure that any local requirements/legislation concerning the use of hand-held electrical equipment are observed by the surfaces on installation equipment.

Eyes: If eye initation occurs, hold eyelids apart and flush affected area(s) with clean water. Seek medical attention.

Skin: First aid is normally not required. After handling product, it is good work practice to wash your hands. If molten material from the skin. Treat as a burn, and seek Skin: First aid is normally not required. After handling product, it is good work practice to wash your hands. If molten material from the skin. Treat as a burn, and seek Ingestion: Not a normal route of exposure. However, if swallowed and symptoms develop, seek medical attention. Inhalation: If respiratory symptoms or other symptoms of exposure develop, move victim to fresh air. If symptoms persist, seek immediate medic

Intelligible Intel medical attention. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical respiration. Keep victim warm and quiet; seek immediate medical Os to be Taken in Case of Release or Spill: Wear appropriate personal protection when responding then sweep up and collect

stion Byproducts and Other Precautions.

See also sections on Thermal Degradation and

Material Safety Data Sheet

24 Hour Assistance: 1-847-367-7700 Rust-Oleum Corp. www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:

HARDHILSPR 6PK FLAT RED

Revision Date: 05/30/2008

Identification

PRIMER

V2169838

Number:

Product Use/Class: Primer/Hard Hat Aerosol

Supplier:

Rust-Oleum Corporation

11 Hawthorn Parkway

Vernon Hills, IL 60061

USA

Preparer:

Regulatory Department

Manufacturer:

Rust-Oleum Corporation

11 Hawthorn Parkway

Vernon Hills, IL 60061

USA

Section 2 - Composition / Information On Ingredients

		Weight % Less				
Chemical Name	CAS Number	<u>Than</u>	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	1000 PPM	N.E.	1000 PPM	N.E.
Acetone	67-64-1	25.0	500 PPM	750 PPM	750 PPM	N.E.
Xylene	1330-20-7	10.0	100 PPM	150 PPM	100 PPM	N.E.
Magnesium Silicate	14807-96-6	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Mineral Spirits	64742-88-7	10.0	100 PPM	N.E.	100 PPM	N.E.
N-Butyl Acetate	123-86-4	5.0	150 PPM	200 PPM	150 PPM	N.E.
Ethylbenzene	100 -4 1-4	5.0	100 PPM	125 PPM	100 PPM	N,E.
Zinc Phosphate	7779-90-0	5.0	N.E.	N.E.	N.E.	N.E.
Microcrystalline Silica	14808-60-7	1.0	0.025 mg/m3	N.E.	0.10 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contains Aromatic Distillate, which may cause cancer. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue,

mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Contains crystalline silica as silicon dioxide. Excessive inhalation of respirable crystalline silica dust may cause lung disease, silicosis or lung cancer. Significant exposure is not anticipated during brush or trowel application or drying. Risk of overexposure depends on the duration and level of exposure to dust from repeated sanding of surfaces, mechanical abrasion or spray mist and actual concentration of crystalline silica in the formula. Crystalline silica is listed as Group 1 "carcinogenic to humans" by the International Agency for Research on Cancer (IARC,) and Group 2, "reasonably anticipated to be a carcinogen" by the National Toxicology Program (NTP)

Primary Route(s) Of Entry: Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.



Section 5 - Fire Fighting Measures

Flash Point: -156 F

(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 % UPPER EXPLOSIVE LIMIT: 12.8 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Water spray may be ineffective. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.



Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product

residues. Avoid breathing vapor or mist. Wash thoroughly after handling. Use only in a well-ventilated area. Wash hands before eating.



Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.



Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:

-34 - 415 F

Solvent Like

Vapor Density: Odor Threshold: Heavier than Air

Odor: Appearance:

Liquid

Evaporation Rate:

Faster than Ether

Solubility in H2O:

Olimba

Slight

Specific Gravity:

0.867

Freeze Point: Vapor Pressure:

ND ND

PH:

NE

Physical State:

Liquid

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.



Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND Product LC50: ND

 Chemical Name
 LD50
 LC50

 Liquefied Petroleum Gas
 N.D.
 N.D.

 Acetone
 N.D.
 N.D.

Xylene 4300, mg/kg (Oral Rat) 5000 ppm/4hr (Inhalation, Rat)

Magnesium SilicateN.D.TCLo:11mg/m3 inh.Mineral SpiritsRAT >8ML/KGRAT >1400PPM 4HRN-Butyl Acetate13100 mg/kg (ORAL, RAT) 2000 PPM (INH 4 Hr, RAT)

Ethylbenzene3500 mg/kg (ORAL, RAT)N.D.Zinc PhosphateN.D.N.D.Microcrystalline SilicaN.D.N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information



Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name: Aerosols Packing Group: —

DOT Technical Name: — Hazard Subclass: 2.1

DOT Hazard Class: 2 Resp. Guide Page: 126

DOT UN/NA Number: UN1950

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD



SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of

Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:



Chemical Name
Xylene
Ethylbenzene
Zinc Phosphate

CAS Number 1330-20-7 100-41-4 7779-90-0

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name Modified Alkyd Resin CAS Number PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name
Modified Alkyd Resin
Calcium Carbonate
Iron Oxide
Acrylic Resin

CAS Number PROPRIETARY 1317-65-3 1309-37-1 PROPRIETARY

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information



HMIS Ratings:

Health: 2*

Flammability: 4

Reactivity: 0

Personal Protection: X

REASON FOR REVISION: Regulatory Update



Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Printing date 11/13/2008

Reviewed on 11/13/2008

1 Identification of substance

Trade name:

BRITE & CLEAR GLASS CLEANER

Product code:

0000200020

Manufacturer/Supplier:

SEYMOUR OF SYCAMORE

917 Crosby Avenue Sycamore, IL 60178

(815)-895-9101, www.seymourpaint.com

CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.* Emergency information:

2 Composition/Data on components

This product is a mixture of the substances listed below with nonhazardous additions. **Chemical Description:**

Dangerous	s components:	
	propane	3.79%
	isopropyl alcohol	2.35%
	Glycol Ether EB	2.35%
106-97-8		2.23%
1336-21-6	ammonia	0.19%

3 Hazards identification

Physical dangers:

Flammable.

Keep out of the reach of children.

Effects of chronic

overexposure:

May cause permanent brain and nervous system damage. Repeated overexposure can also damage

kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be

harmful or fatal.

NFPA ratings (scale 0 - 4): Health-

Flammability- 1

Reactivity-

HMIS-ratings (scale 0 - 4): Health-

Flammability-

Physical Hazard-3

4 First aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Remove contaminated clothing. Wash exposed area with soap and water.

After eye contact: After swallowing:

Rinse opened eye for several minutes under running water. Contact physician or poison control center.

5 Fire fighting measures

Protective equipment:

No special measures required.

6 Accidental release measures

Personal safety

precautions:

Wear protective equipment. Keep unprotected persons away.

Environmental safety

precautions:

Do not allow product to reach sewage systems or ground water.

Measures for cleaning/

collecting:

Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic

Storage requirements:

Observe pressurized container storage regulations. Consult with your local authorities.

(Contd. on page 2)

USA



Reviewed on 11/13/2008 Printing date 11/13/2008

Trade name: BRITE & CLEAR GLASS CLEANER

(Contd. of page 1)

8 Exposure controls and personal protection:

Components with limit values that require monitoring at the workplace:
74-98-6 propane
PEL 1800 mg/m³, 1000 ppm
REL 1800 mg/m³, 1000 ppm
TLV Varies mg/m³, 1000 ppm
67-63-0 isopropyl alcohol
PEL 980 mg/m³, 400 ppm
REL Short-term value: 1225 mg/m³, 500 ppm
Long-term value: 980 mg/m ³ , 400 ppm
TLV Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm
BEI
111-76-2 Glycol Ether EB
PEL 240 mg/m³, 50 ppm
Skin
REL 24 mg/m³, 5 ppm Skin
TLV 97 mg/m³, 20 ppm
106-97-8 n-butane
REL 1900 mg/m³, 800 ppm
TLV Varies mg/m³, 1000 ppm

Protective hygienic

measures:

Wash hands after use.

Breathing equipment:

A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. Please consult an authority on chemical hygeine monitoring if you suspect overexposure conditions exist and need a specific recommendation on proper ventilation techniques and personal protection.

Protection of hands:

Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove

recommendation can be given.

Eye protection:

Tightly sealed goggles

9 Physical and chemical properties:

General Information: Odor: Boiling point/Boiling range:	Aromatic -44°C
Flash point:	-19°C
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit. In use, may form flammable/explosive vapour-air mixture. 40 PSI. 2750 hPa
Vapor Pressure:	
Density at 20°C: Specific Gravity:	0.93944 g/cm ³ Between 0.77 and 0.85 (Water equals 1.00)
VOC content: VOC content (less exempt solver Water: MIR value: MIR Value:	nts): 10.6 % 89.0 % 10.6 % 0.14
Solids content:	0.4 %

10 Stability and reactivity:

Conditions to be avoided: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Possibility of Hazardous

No dangerous reactions known. Reactions:

11 Toxicological information:

Primary effect on the skin: No irritant effect.

(Contd. on page 3)

(Contd. of page 2)

Material Safety Data Sheet acc. to ISO/DIS 11014

Reviewed on 11/13/2008 Printing date 11/13/2008

Trade name: BRITE & CLEAR GLASS CLEANER

Primary effect on the eye: No irritating effect.

Sensitization:

No sensitizing effects known.

12 Ecological information

Other information:

This product does not contain any chloroflourocarbons (CFC's), chlorinated solvents, lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), or polybrominated diphenyl ether

(PDBE). No specific ecological data is available for this product.

Acquatic toxicity:

Hazardous for water, do not empty into drains.

13 Disposal considerations

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact.

Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation:

Completely empty cans should be recycled.

14 Transport information:

2.1 Hazard class:

N/A Identification number: 2.1 Label

ADR/RID class:

2 5F Gases 1950

UN-Number: IMDG Class:

2.1 II

Packaging group: **EMS Number:** Marine pollutant:

F-D,S-U Nο 2.1

ICAO/IATA Class: Propper shipping name:

Aerosols, Flammable

Consumer Commodity ORM-D

15 Regulations

CHANAC				. 1 . 4
SAKA S	ection 555	textremely	nazardous	substances):

None of the ingredients in this product are listed

SARA Section 313 (Specific toxic chemical listings):

67-63-0 isopropyl alcohol

111-76-2 Glycol Ether EB

TSCA (Toxic Substances

All ingredients are listed. Control Act):

PROPOSITION 65 Chemicals known to cause cancer:

None of the ingredients in this product are listed.

EPA:

A= Known human carcinogen

B= Probable human carcinogen

C= Possible human carcinogen

D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).

111-76-2 Glycol Ether EB

IARC:

Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of

carcinogenicity. Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

67-63-0 isopropyl alcohol

3 3

111-76-2 Glycol Ether EB ACGIH TLVs:

A1-designates a confirmed human carcinogen.

A2-designates a suspected human carcinogen.

A3-designates an animal carcinogen.

A4-designates "not classifiable as a human carcinogen".

67-63-0 isopropyl alcohol 111-76-2 Glycol Ether EB

A4 A3

NIOSH:

None of the ingredients is listed.

Risk phrases: Safety phrases: Flammable.

Keep out of the reach of children.

(Contd. on page 4)

Printing date 11/13/2008

Reviewed on 11/13/2008

(Contd. of page 3)

Trade name: BRITE & CLEAR GLASS CLEANER

Keep in a cool place.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

Take precautionary measures against static discharges.

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

This material and its container must be disposed of as hazardous waste.

Special labeling of certain

preparations:

Keep out of the reach of children.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact:

Regulatory Affairs

Abbreviations and acronyms:

ADR: Accord europeen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

International Carriage of Dangerous Goods by Road)

IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)



Printing date 11/14/2008

Reviewed on 11/14/2008

1 Identification of substance

Trade name:

MRO SAFETY YELLOW

Product code:

0006201419

Manufacturer/Supplier:

SEYMOUR OF SYCAMORE

917 Crosby Avenue Sycamore, IL 60178

(815)-895-9101, www.seymourpaint.com

CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.* **Emergency information:**



This product is a mixture of the substances listed below with nonhazardous additions. **Chemical Description:**

Dangerous	components:	
67-64-1	Acetone	19.16%
74 - 98-6	propane	15.75%
106-97-8	n-butane	9.25%
7727-43-7	barium sulphate, natural	8.08%
2807-30-9	Glycol Ether EP	5.17%
108-10-1	methyl isobutyl ketone	5.05%
13463-67-7	titanium dioxide	3.79%
	Methyl Propyl Ketone	3.27%
110-19-0	isobutyl acetate	2.59%
	xylene (mix)	2.43%
108-65-6	PM acetate	2.23%
82199-12-0	Novaperm Yellow Pigment	1.2%

3 Hazards identification

Hazard description:



Irritant

Extremely flammable

Physical dangers:

Extremely flammable.

Irritating to eyes and respiratory system. Vapours may cause drowsiness and dizziness

Keep out of the reach of children.

Effects of chronic

overexposure:

May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be

harmful or fatal.

NFPA ratings (scale 0 - 4): Health =

Fire =

Reactivity = 3

HMIS-ratings (scale 0 - 4): Health=

Physical Hazard= 3

4 First aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Remove contaminated clothing. Wash exposed area with soap and water.

After eye contact:

Move to fresh air. Rinse opened eye for several minutes under running water. If symptoms persist,

consult a doctor.

After swallowing:

Contact physician or poison control center.

5 Fire fighting measures

Extinguishing agents:

CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant

Protective equipment:

No special measures required.

6 Accidental release measures

Personal safety

precautions:

Wear protective equipment. Keep unprotected persons away.

Environmental safety

precautions:

Do not allow product to reach sewage systems or ground water.

(Contd. on page 2)

Reviewed on 11/14/2008 Printing date 11/14/2008

Trade name: MRO SAFETY YELLOW

(Contd. of page 1)

Measures for cleaning/

collecting:

Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic

discharges.

Storage requirements:

Observe pressurized container storage regulations. Consult with your local authorities.

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U Martin Commission	AAMENA A AMA	marcarat r	motootions.
A PARIDOSHIE	controls and	IRCESUMAT U	I ELLECT FIELDS.

	nents with limit values that require monitoring at the workplace:
	Acetone
PEL REL TLV	2400 mg/m³, 1000 ppm 590 mg/m³, 250 ppm Short-term value: 1782 mg/m³, 750 ppm Long-term value: 1188 mg/m³, 500 ppm BEI
74-98-0	propane
PEL REL TLV	1800 mg/m³, 1000 ppm 1800 mg/m³, 1000 ppm Varies mg/m³, 1000 ppm
106-97	-8 n-butane
REL TLV	1900 mg/m³, 800 ppm Varies mg/m³, 1000 ppm
	3-7 barium sulphate, natural
PEL REL	15* 5** mg/m³ *total dust **respirable fraction 10* 5** mg/m³
TLV	*total dust **respirable fraction 10 mg/m³ E
108-10	-1 methyl isobutyl ketone
PEL REL	410 mg/m ³ , 100 ppm Short-term value: 300 mg/m ³ , 75 ppm Long-term value: 205 mg/m ³ , 50 ppm
TLV	Short-term value: 307 mg/m³, 75 ppm Long-term value: (205) NIC-123 mg/m³, (50) NIC-30 ppm BEI;NIC-A3
107-87	9 Methyl Propyl Ketone
PEL REL TLV	700 mg/m³, 200 ppm 530 mg/m³, 150 ppm Short-term value: 529 mg/m³, 150 ppm
	-0 isobutyl acetate
PEL REL TLV	700 mg/m³, 150 ppm 700 mg/m³, 150 ppm 713 mg/m³, 150 ppm
	0-7 xylene (mix)
PEL REL	435 mg/m ³ , 100 ppm Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI
	-6 PM acetate
WEEL	50 ppm
	ivo hydronia

Protective hygienic

measures:

Keep away from foodstuffs and animal feed. Wash hands after use.

Breathing equipment:

A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. Please consult an authority on chemical hygeine monitoring if you suspect overexposure conditions exist and need a specific recommendation on proper ventilation techniques and personal protection. Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given

Protection of hands:

recommendation can be given.

(Contd. on page 3)

Reviewed on 11/14/2008 Printing date 11/14/2008

Trade name: MRO SAFETY YELLOW

Tightly sealed goggles Eye protection:

(Contd. of page 2)

9 Physical and chemical properties:

General Information: Odor: Boiling point/Boiling range:	Aromatic -44°C
Flash point:	-19°C
Ignition temperature:	230°C
Auto igniting:	Product is not self-igniting.
Danger of explosion: Lower Explosion Limit: Upper Explosion Limit: Vapor Pressure:	Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit. In use, may form flammable/explosive vapour-air mixture. 1.7 Vol % 10.9 Vol % 40 PSI, 2750 hPa
Density at 20°C: Specific Gravity:	0.8443 g/cm ³ Between 0.77 and 0.85 (Water equals 1.00)
VOC content: VOC content (less exempt solvent MIR value: MIR Value:	493.7 g/l / 4.12 lb/gl s): 46.5 % 46.5 % 1.06
Solids content:	33.9 %

10 Stability and reactivity:

Conditions to be avoided: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Possibility of Hazardous

Reactions:

No dangerous reactions known.

11 Toxicological information:

Primary effect on the skin: No irritant effect. Primary effect on the eye: Irritating effect.

Sensitization:

No sensitizing effects known.

Additional toxicological

information:

The product shows the following dangers according to internally approved calculation methods for

preparations:

12 Ecological information

Other information:

This product does not contain any chloroflourocarbons (CFC's), chlorinated solvents, lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), or polybrominated diphenyl ether

(PDBE). No specific ecological data is available for this product.

Hazardous for water, do not empty into drains. Acquatic toxicity:

13 Disposal considerations

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation:

Completely empty cans should be recycled.

14 Transport information:

Hazard class: Identification number: Label

2.1 N/A 2.1 + 8

ADR/RID class: **UN-Number:**

2 5FC Gases

IMDG Class: Packaging group: **EMS Number:**

1950 2.1 F-D,S-U

(Contd. on page 4)

(Contd. of page 3)

Material Safety Data Sheet acc. to ISO/DIS 11014

Reviewed on 11/14/2008 Printing date 11/14/2008

Trade name: MRO SAFETY YELLOW

Marine pollutant: No ICAO/IATA Class: 2.1

Aerosols, Flammable Propper shipping name:

Consumer Commodity ORM-D

15 Regulations

The state of the s	
SARA Section 355 (extremely hazardous substances):	
None of the ingredients in this product are listed.	
SARA Section 313 (Specific toxic chemical listings):	
108-10-1 methyl isobutyl ketone	
1330-20-7 xylene (mix)	
TSCA (Toxic Substances	

Control Act):

All ingredients are listed.

PROPOSITION 65 Chemicals known to cause cancer:

100-41-4 ethyl benzene

EPA: A= Known human carcinogen B= Probable human carcinogen

C= Possible human carcinogen

D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).

67-64-1	Acetone	I
108-10-1	methyl isobutyl ketone	I
110-19-0	isobutyl acetate	D
1330-20-7	xylene (mix)	I

IARC:

Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of carcinogenicity.

Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

13463-67-7 titanium dioxide 2B 1330-20-7 xylene (mix) 3

ACGIH TLVs:

A1-designates a confirmed human carcinogen. A2-designates a suspected human carcinogen.

A3-designates an animal carcinogen.

A4-designates "not classifiable as a human carcinogen".

67-64-1	Acetone	A4
	titanium dioxide	A4
110-19-0	isobutyl acetate	A4
1330-20-7	xylene (mix)	A4

NIOSH:

13463-67-7 titanium dioxide

1333-86-4 Carbon black

Risk phrases:

Extremely flammable.

Irritating to eyes and respiratory system. Vapours may cause drowsiness and dizziness

Safety phrases:

Keep out of the reach of children.

Keep in a cool place.

Keep container in a well-ventilated place.

Keep away from food, drink and animal feedingstuffs. Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray.

Avoid contact with eyes.

Do not empty into drains, dispose of this material and its container at hazardous or special waste

collection point

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 5)

Reviewed on 11/14/2008 Printing date 11/14/2008

Trade name: MRO SAFETY YELLOW

Contact:

Regulatory Affairs

(Contd. of page 4)

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

VOC: Volatile Organic Compounds (USA, EU)

USA :

Printing date 11/14/2008

Reviewed on 11/14/2008

1 Identification of substance

Trade name:

MRO GLOSS BLACK

Product code:

0006201415

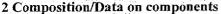
Manufacturer/Supplier:

SEYMOUR OF SYCAMORE

917 Crosby Avenue

Sycamore, IL 60178 (815)-895-9101, www.seymourpaint.com

CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.* **Emergency information:**



Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous	components:	
	Acetone	22.56%
74-98-6	propane	15.75%
106-97-8	n-butane	9.25%
7727-43-7	barium sulphate, natural	8.51%
	Glycol Ether EP	5.45%
	methyl isobutyl ketone	5.16%
	Methyl Propyl Ketone	3.33%
	xylene (mix)	2.69%
	PM acetate	1.83%
	isobutyl acetate	1.41%

3 Hazards identification

Hazard description:



Irritant

Extremely flammable

Physical dangers:

Extremely flammable. Irritating to eyes.

Vapours may cause drowsiness and dizziness

Keep out of the reach of children.

Effects of chronic

overexposure:

May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be

harmful or fatal.

NFPA ratings (scale 0 - 4):

Health = Fire = Reactivity = 3

HMIS-ratings (scale 0 - 4): Health=

Physical Hazard= 3

4 First aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact: After eve contact:

Remove contaminated clothing. Wash exposed area with soap and water.

Move to fresh air. Rinse opened eye for several minutes under running water. If symptoms persist,

consult a doctor.

After swallowing:

Contact physician or poison control center.

5 Fire fighting measures

Extinguishing agents:

CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant

Protective equipment:

No special measures required.

6 Accidental release measures

Personal safety

precautions:

Wear protective equipment. Keep unprotected persons away.

Environmental safety

Do not allow product to reach sewage systems or ground water. precautions:

(Contd. on page 2)

(Contd. of page 1)

Material Safety Data Sheet acc. to ISO/DIS 11014

Reviewed on 11/14/2008 Printing date 11/14/2008

Trade name: MRO GLOSS BLACK

Measures for cleaning/ collecting:

Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic

Storage requirements:

Observe pressurized container storage regulations. Consult with your local authorities.

Compo	nents with limit values that require monitoring at the workplace:
	Acetone
PEL REL TLV	2400 mg/m³, 1000 ppm 590 mg/m³, 250 ppm Short-term value: 1782 mg/m³, 750 ppm Long-term value: 1188 mg/m³, 500 ppm BEI
74-98-0	propane
PEL REL TLV	1800 mg/m³, 1000 ppm 1800 mg/m³, 1000 ppm Varies mg/m³, 1000 ppm
	8 n-butane
REL TLV	1900 mg/m³, 800 ppm Varies mg/m³, 1000 ppm
	3-7 barium sulphate, natural
PEL REL	15* 5** mg/m³ *total dust **respirable fraction 10* 5** mg/m³
TLV	*total dust **respirable fraction 10 mg/m³ E.
108-10	1 methyl isobutyl ketone
	410 mg/m³, 100 ppm Short-term value: 300 mg/m³, 75 ppm Long-term value: 205 mg/m³, 50 ppm Short-term value: 307 mg/m³, 75 ppm Long-term value: (205) NIC-123 mg/m³, (50) NIC-30 ppm BEI;NIC-A3
107-87-	9 Methyl Propyl Ketone
PEL REL TLV	700 mg/m³, 200 ppm 530 mg/m³, 150 ppm Short-term value: 529 mg/m³, 150 ppm
	0-7 xylene (mix)
PEL REL	435 mg/m³, 100 ppm Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm
TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm BEI
	6 PM acetate
	50 ppm
	0 isobutyl acetate
REL	700 mg/m³, 150 ppm 700 mg/m³, 150 ppm 713 mg/m³, 150 ppm

Protective hygienic measures:

Breathing equipment:

Keep away from foodstuffs and animal feed. Wash hands after use.

A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. Please consult an authority on chemical hygeine monitoring if you suspect overexposure conditions exist and need a specific recommendation on proper ventilation techniques and personal protection.

Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove Protection of hands: recommendation can be given.

(Contd. on page 3)

Printing date 11/14/2008 Reviewed on 11/14/2008

Trade name: MRO GLOSS BLACK

Eye protection:

Tightly sealed goggles

(Contd. of page 2)

9 Physical and chemical properties:

General Information: Odor: Boiling point/Boiling range:	Aromatic -44°C
Flash point:	-19°C
Ignition temperature:	230°C
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit. In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit: Upper Explosion Limit: Vapor Pressure:	1.7 Vol % 10.9 Vol % 40 PSI, 2750 hPa
Density at 20°C: Specific Gravity:	0.82201 g/cm ³ Between 0.77 and 0.85 (Water equals 1.00)
VOC content: VOC content (less exempt solvent MIR value: MIR Value:	495.5 g/l / 4.14 lb/gl s): 46.2 % 46.2 % 1.11
Solids content:	30.9 %

10 Stability and reactivity:

Conditions to be avoided: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Possibility of Hazardous

Reactions:

No dangerous reactions known.

11 Toxicological information:

Primary effect on the skin: No irritant effect. Primary effect on the eye: Irritating effect.

Sensitization:

Additional toxicological

information:

No sensitizing effects known.

The product shows the following dangers according to internally approved calculation methods for

preparations:

12 Ecological information

Other information:

This product does not contain any chloroflourocarbons (CFC's), chlorinated solvents, lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB), or polybrominated diphenyl ether

(PDBE). No specific ecological data is available for this product.

Acquatic toxicity: Hazardous for water, do not empty into drains.

13 Disposal considerations

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation: Completely empty cans should be recycled.

14 Transport information:

Hazard class: 2.1
Identification number: N/A
Label 2.1+8

ADR/RID class: 2 5FC Gases

ADR/RID class: 2 SFC Gas
UN-Number: 1950
IMDG Class: 2.1
Packaging group: II
EMS Number: F-D,S-U

(Contd. on page 4)

(Contd. of page 3)

Material Safety Data Sheet acc. to ISO/DIS 11014

Reviewed on 11/14/2008 Printing date 11/14/2008

Trade name: MRO GLOSS BLACK

Marine pollutant: No

	Marine pollutant: ICAO/IATA Class: Propper shipping name:	No 2.1 Aerosols, Flammable Consumer Commodity ORM-D	
	15 Regulations		
	SARA Section 355 (extren	nely hazardous substances):	
	None of the ingredients in the	nis product are listed.	
	SARA Section 313 (Specif	ic toxic chemical listings):	
	108-10-1 methyl isobutyl	ketone	
	1330-20-7 xylene (mix)		
	TSCA (Toxic Substances Control Act):	All ingredients are listed.	
		icals known to cause cancer:	
	1333-86-4 Carbon black		
	100-41-4 ethyl benzene	The state of the s	
	EPA:	A= Known human carcinogen C= Possible human carcinogen D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence carcinogenicity (or no data is available).	of
	67-64-1 Acetone		I
	108-10-1 methyl isobutyl		I
	1330-20-7 xylene (mix)		I
	110-19-0 isobutyl acetate		D
	IARC:	Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence carcinogenicity. Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.	
i	1330-20-7 xylene (mix)		3
	ACGIH TLVs:	A1-designates a confirmed human carcinogen. A2-designates a suspected human carcinogen. A3-designates an animal carcinogen. A4-designates "not classifiable as a human carcinogen".	
	67-64-1 Acetone		A4
	1330-20-7 xylene (mix)	<u></u>	A4
	110-19-0 isobutyl acetate		A4
	NIOSH:		
	1333-86-4 Carbon black		
	Risk phrases:	Extremely flammable. Irritating to eyes. Vapours may cause drowsiness and dizziness	
	Safety phrases:	Keep out of the reach of children. Keep in a cool place.	

Keep in a cool place.

Keep container in a well-ventilated place.
Keep away from food, drink and animal feedingstuffs. Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray.

Avoid contact with eyes.

Do not empty into drains, dispose of this material and its container at hazardous or special waste

collection point

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact:

acronyms:

Regulatory Affairs

Abbreviations and

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

(Contd. on page 5)

Printing date 11/14/2008

Reviewed on 11/14/2008

Trade name: MRO GLOSS BLACK

IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)

(Contd. of page 4)

KMB00011299



Printing date 11/14/2008

Reviewed on 11/14/2008

1 Identification of substance

Trade name:

TOOL CRIB DRY MOLY LUBE

Product code:

0006201505

Manufacturer/Supplier:

SEYMOUR OF SYCAMORE

917 Crosby Avenue Sycamore, IL 60178

(815)-895-9101, www.seymourpaint.com

CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.* **Emergency information:**



2 Composition/Data on components

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous	components:	
67-64-1	Acetone	50.12%
74-98-6	propane	18.9%
106-97-8	n-butane	11.1%
67-63-0	isopropyl alcohol	9.67%
	Glycol Ether EP	5.0%
	xylene (mix)	1.79%

3 Hazards identification

Hazard description:



Irritant

Extremely flammable

Physical dangers:

Extremely flammable.

Irritating to eyes.

Vapours may cause drowsiness and dizziness

Keep out of the reach of children.

Effects of chronic

overexposure:

May cause permanent brain and nervous system damage. Repeated overexposure can also damage

kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be

harmful or fatal.

NFPA ratings (scale 0 - 4): Health =

Fire =

Reactivity = 3

HMIS-ratings (scale 0 - 4): Health=

Fire=

Physical Hazard= 3

4 First aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Remove contaminated clothing. Wash exposed area with soap and water.

After eye contact:

Move to fresh air. Rinse opened eye for several minutes under running water. If symptoms persist,

consult a doctor.

After swallowing:

Contact physician or poison control center.

5 Fire fighting measures

Extinguishing agents:

CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant

Protective equipment:

No special measures required.

6 Accidental release measures

Personal safety

precautions:

Wear protective equipment. Keep unprotected persons away.

Environmental safety precautions:

Do not allow product to reach sewage systems or ground water.

Measures for cleaning/

collecting:

Ensure adequate ventilation.

7 Handling and storage

Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic Fire/explosion protection:

discharges.

(Contd. on page 2)

Printing date 11/14/2008

Reviewed on 11/14/2008

Trade name: TOOL CRIB DRY MOLY LUBE

Observe pressurized container storage regulations. Consult with your local authorities. Storage requirements:

(Contd. of page 1)

8 Exposure controls and personal protection:

Com	nponents with limit values that require monitoring at the workplace:		
67-64	-1 Acetone		
REL	2400 mg/m³, 1000 ppm 590 mg/m³, 250 ppm Short-term value: 1782 mg/m³, 750 ppm Long-term value: 1188 mg/m³, 500 ppm BEI		
74-98	-6 ргоране		
REL	1800 mg/m³, 1000 ppm 1800 mg/m³, 1000 ppm Varies mg/m³, 1000 ppm		
106-9	7-8 n-butane		
	1900 mg/m³, 800 ppm Varies mg/m³, 1000 ppm		
67-63	-0 isopropyl alcohol		
REL	980 mg/m³, 400 ppm Short-term value: 1225 mg/m³, 500 ppm Long-term value: 980 mg/m³, 400 ppm Short-term value: 984 mg/m³, 400 ppm Long-term value: 492 mg/m³, 200 ppm BEI		
1330-	20-7 xylene (mix)		
REL	435 mg/m³, 100 ppm Short-term value: 655 mg/m³, 150 ppm Long-term value: 435 mg/m³, 100 ppm		
TLV	Short-term value: 651 mg/m³, 150 ppm Long-term value: 434 mg/m³, 100 ppm		

Protective hygienic

BEI

measures:

Keep away from foodstuffs and animal feed. Wash hands after use.

Breathing equipment:

A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. Please consult an authority on chemical hygeine monitoring if you suspect overexposure conditions exist and need a specific recommendation on proper ventilation techniques and personal protection.

Protection of hands:

Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given.

Eye protection:

Tightly sealed goggles

9 Physical and chemical properties:

General Information: Odor: Boiling point/Boiling range:	Aromatic -44°C
Flash point:	-19°C
Ignition temperature:	365°C
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit. In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit: Upper Explosion Limit: Vapor Pressure:	1.5 Vol % 10.9 Vol % 40 PS1, 2750 hPa
Density at 20°C: Specific Gravity:	0.70674 g/cm³ Between 0.77 and 0.85 (Water equals 1.00)
VOC content: VOC content (less exempt solvent MIR value:	600.3 g/l / 5.01 lb/gl ts): 46.9 % 46.9 %

(Contd. on page 3)

		Reviewed on 11/14/
inting date 11/14/2008		Reviewed off 11/14/.
rade name: TOOL CRIB DRY	Y MOLY LUBE	
		{Contd. of pa
MIR Value:	0.64	- AND
	N. C.	
Solids content:	3.0 %	- Valley
0 Ctability and magativity		
O Stability and reactivity: Conditions to be avoided:	Do not allow the can to exceed 120 degrees Fahrenheit. Stable at norma	al temneratures.
Possibility of Hazardous		<u>-</u>
Reactions:	No dangerous reactions known.	
1 Toxicological information	On.	
Primary effect on the skin		
Primary effect on the eye:	Irritating effect.	
Sensitization:	No sensitizing effects known.	
Additional toxicological information:	The product shows the following dangers according to internally ap	proved calculation methods
	preparations:	
2 Ecological information		
Other information:	This product does not contain any chloroflourocarbons (CFC's), chlo cadmium, hexavalent chromium, polybrominated biphenyl (PBB), or	ormated solvents, lead, mercu r polybrominated diphenyl et
	(PDBE). No specific ecological data is available for this product.	i poryorominacca dipitenyi et
Acquatic toxicity:	Hazardous for water, do not empty into drains.	
Recommendation:	e disposed of responsibly. Do not heat or cut empty containers with electric Completely empty cans should be recycled.	To or gas to ones.
4 Transport information:		
Hazard class:	2.1	
Identification number:	N/A 2.1	
Label ADR/RID class:	2.1 2.5F Gases	
UN-Number:	1950	
UN-Number: IMDG Class:	1950 2.1	
UN-Number: IMDG Class: Packaging group:	1950 2.1 II	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant:	1950 2.1	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class:	1950 2.1 II F-D,S-U No 2.1	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant:	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class:	1950 2.1 II F-D,S-U No 2.1	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name:	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name:	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: Regulations SARA Section 355 (extren	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: Regulations SARA Section 355 (extrent None of the ingredients in the section 150 of the ingredients in the sect	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrent None of the ingredients in the SARA Section 313 (Specifications)	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D nely hazardous substances): his product are listed. ic toxic chemical listings):	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrem None of the ingredients in the sarah section 313 (Specifier-67-63-0) isopropyl alcohological section 313 (Specifier-67-67-67-67-67-67-67-67-67-67-67-67-67-	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D nely hazardous substances): his product are listed. ic toxic chemical listings):	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrem None of the ingredients in the SARA Section 313 (Specification of the ingredients) 67-63-0 isopropyl alcohologian of the ingredients in the SARA Section 313 (Specification of the ingredients)	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D nely hazardous substances): his product are listed. ic toxic chemical listings):	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrem None of the ingredients in the SARA Section 313 (Specification of the ingredients) 67-63-0 isopropyl alcohological of the ingredients in the SARA Section 313 (Specification of the ingredients) TSCA (Toxic Substances Control Act):	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. The toxic chemical listings): ol All ingredients are listed.	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrem None of the ingredients in the SARA Section 313 (Specific 67-63-0 isopropyl alcohol 1330-20-7 xylene (mix) TSCA (Toxic Substances Control Act): PROPOSITION 65 Chemical Substances Control Act):	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. Te toxic chemical listings): ol	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extren None of the ingredients in the same of the ingredients of the ingredient	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D nely hazardous substances): his product are listed. ic toxic chemical listings): ol All ingredients are listed. icals known to cause cancer:	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrem None of the ingredients in the SARA Section 313 (Specific 67-63-0) isopropyl alcohology (mix) TSCA (Toxic Substances Control Act): PROPOSITION 65 Chemical Control Act (Control Act)	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. lie toxic chemical listings): ol All ingredients are listed. licals known to cause cancer: A= Known human carcinogen B= Probable human carcinogen	
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extren None of the ingredients in the SARA Section 313 (Specified 67-63-0) isopropyl alcohologistic lateral (isopropyl alcohologistic) TSCA (Toxic Substances Control Act): PROPOSITION 65 Chemi 100-41-4 ethyl benzene	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. ic toxic chemical listings): ol All ingredients are listed. icals known to cause cancer: A= Known human carcinogen C= Possible human carcinogen	uman and animal evidence
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extren None of the ingredients in the same of the ingredients of the ingredient	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. ic toxic chemical listings): ol All ingredients are listed. icals known to cause cancer: A= Known human carcinogen C= Possible human carcinogen D= Not classifiable as to human carcinogenicity: Inadequate h	uman and animal evidence
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extren None of the ingredients in the sarah section 313 (Specification of the ingredients of the sarah section 313 (Specification of the ingredients of the sarah section 313 (Specification of the ingredients of the sarah section 313 (Specification of the ingredients of the sarah section 313 (Specification of the ingredients of the sarah section 313 (Specification of the sarah section of	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. ic toxic chemical listings): ol All ingredients are listed. icals known to cause cancer: A= Known human carcinogen C= Possible human carcinogen	numan and animal evidence
UN-Number: IMDG Class: Packaging group: EMS Number: Marine pollutant: ICAO/IATA Class: Propper shipping name: 5 Regulations SARA Section 355 (extrem None of the ingredients in the same of the ingredients of the same of the	1950 2.1 II F-D,S-U No 2.1 Aerosols, Flammable Consumer Commodity ORM-D mely hazardous substances): his product are listed. ic toxic chemical listings): ol All ingredients are listed. icals known to cause cancer: A= Known human carcinogen C= Possible human carcinogen D= Not classifiable as to human carcinogenicity: Inadequate h	uman and animal evidence

Printing date 11/14/2008

Reviewed on 11/14/2008

Trade name: TOOL CRIB DRY MOLY LUBE (Contd. of page 3) Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of IARC: carcinogenicity. Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans. 3 67-63-0 isopropyl alcohol 3 1330-20-7 xylene (mix) **ACGIH TLVs:** A1-designates a confirmed human carcinogen. A2-designates a suspected human carcinogen. A3-designates an animal carcinogen. A4-designates "not classifiable as a human carcinogen". A4 67-64-1 Acetone A4 67-63-0 isopropyl alcohol A4 1330-20-7 xylene (mix) NIOSH: None of the ingredients is listed. Risk phrases: Extremely flammable. Irritating to eyes. Vapours may cause drowsiness and dizziness Keep out of the reach of children. Safety phrases: Keep container tightly closed in a cool place Keep container in a well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep away from sources of ignition - No smoking. Do not breathe gas/fumes/vapour/spray. Avoid contact with eyes, Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point If swallowed, seek medical advice immediately and show this container or label. Use only in well-ventilated areas.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Regulatory Affairs

Abbreviations and

acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the

International Carriage of Dangerous Goods by Road)

IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
VOC: Volatile Organic Compounds (USA, EU)

USA

Reviewed on 11/13/2008 Printing date 11/13/2008

1 Identification of substance

Trade name:

STRIPE INVERTED TIP WHITE

Product code:

0000200652

Manufacturer/Supplier:

SEYMOUR OF SYCAMORE

917 Crosby Avenue

Sycamore, IL 60178 (815)-895-9101, www.seymourpaint.com

CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.* **Emergency information:**



2 Composition/Data on components

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:	
74-98-6 propane	17.64%
64742-89-8 VM&P Naptha	15.45%
1317-65-3 Calcium Carbonate	15.28%
106-97-8 n-butane	10.36%
13463-67-7 titanium dioxide	6.31%
64742-47-8 Mineral Spirits	5.45%

3 Hazards identification

Hazard description:



Irritant

Extremely flammable

Physical dangers:

Extremely flammable.

Irritating to eyes and respiratory system.

Keep out of the reach of children.

Effects of chronic

overexposure:

May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be

harmful or fatal.

NFPA ratings (scale 0 - 4): Health-

Flammability-

Reactivity-

HMIS-ratings (scale 0 - 4): Health-

Flammability-

Physical Hazard- 3

4 First aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Remove contaminated clothing. Wash exposed area with soap and water.

After eye contact:

Move to fresh air. Rinse opened eye for several minutes under running water. If symptoms persist,

consult a doctor.

After swallowing:

Contact physician or poison control center.

5 Fire fighting measures

Extinguishing agents:

CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant

Protective equipment:

No special measures required.

6 Accidental release measures

Personal safety

precautions:

Wear protective equipment. Keep unprotected persons away.

Environmental safety

precautions:

Measures for cleaning/

Do not allow product to reach sewage systems or ground water.

Ensure adequate ventilation. collecting:

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic

discharges.

(Contd. on page 2)



Reviewed on 11/13/2008 Printing date 11/13/2008

Trade name: STRIPE INVERTED TIP WHITE

Observe pressurized container storage regulations. Consult with your local authorities. Storage requirements:

(Contd. of page 1)

8 Exposure controls and personal protection:

Components with limit values that require monitoring at the	workplace:
74-98-6 propane	
PEL 1800 mg/m³, 1000 ppm REL 1800 mg/m³, 1000 ppm TLV Varies mg/m³, 1000 ppm	
106-97-8 n-butane	
REL 1900 mg/m³, 800 ppm TLV Varies mg/m³, 1000 ppm	

Protective hygienic

measures:

Keep away from foodstuffs and animal feed. Wash hands after use.

Breathing equipment:

A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. Please consult an authority on chemical hygeine monitoring if you suspect overexposure conditions exist and need a specific recommendation on proper ventilation techniques and personal protection.

Protection of hands:

Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove

recommendation can be given.

Eye protection:

Tightly sealed goggles

9 Physical and chemical properties:

General Information: Odor: Boiling point/Boiling range:	Aromatic -44°C
Flash point:	-19°C
Ignition temperature:	210°C
Auto igniting:	Product is not self-igniting.
Danger of explosion:	Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit. In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit: Upper Explosion Limit: Vapor Pressure:	0.9 Vol % 10.9 Vol % 40 PS1, 2750 hPa
Density at 20°C: Specific Gravity:	0.86131 g/cm ³ Between 0.77 and 0.85 (Water equals 1.00)
VOC content: VOC content (less exempt solven Water: MIR value: MIR Value:	515.7 g/l / 4.30 lb/gl ts): 49.4 % 20.3 % 49.4 % 0.59
Solids content:	29.1 %

10 Stability and reactivity:

Conditions to be avoided:

Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Possibility of Hazardous

Reactions:

No dangerous reactions known.

11 Toxicological information:

Primary effect on the skin: No irritant effect. Primary effect on the eye: Irritating effect.

Sensitization:

Additional toxicological information:

No sensitizing effects known.

The product shows the following dangers according to internally approved calculation methods for

preparations:

-- LISA (Contd. on page 3)

Printing date 11/13/2008 Reviewed on 11/13/2008

Trade name: STRIPE INVERTED TIP WHITE

(Contd. of page 2)

12 Ecological information

Other information:

This product does not contain any chloroflourocarbons (CFC's), chlorinated solvents, lead, mercury,

cadmium, hexavalent chromium, polybrominated biphenyl (PBB), or polybrominated diphenyl ether

(PDBE). No specific ecological data is available for this product.

Acquatic toxicity:

Hazardous for water, do not empty into drains.

13 Disposal considerations

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact.

Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation:

Completely empty cans should be recycled.

14 Transport information:

Hazard class:

2.1

Identification number:

N/A

Label

2.1

ADR/RID class:

2 5F Gases

UN-Number:

1950

IMDG Class:

2.1

Packaging group:

EMS Number:

TI

Marine pollutant:

F-D,S-U No

ICAO/IATA Class:

Propper shipping name:

Aerosols, Flammable

Consumer Commodity ORM-D

15 Regulations

S	ARA	Section	1 355	(extremely	hazardo	ous subs	tances):

None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances

Control Act):

All ingredients are listed.

PROPOSITION 65 Chemicals known to cause cancer:

100-41-4 ethyl benzene

EPA:

A= Known human carcinogen

B= Probable human carcinogen

C= Possible human carcinogen

D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of

carcinogenicity (or no data is available). B= Probable human carcinogen

A= Known human carcinogen C= Possible human carcinogen

D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).

IARC:

Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of

Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

13463-67-7 titanium dioxide **ACGIH TLVs:**

A1-designates a confirmed human carcinogen.

A2-designates a suspected human carcinogen.

A3-designates an animal carcinogen.

A4-designates "not classifiable as a human carcinogen".

13463-67-7 titanium dioxide

A4

2B

NIOSH:

13463-67-7 titanium dioxide

Hazard symbols:

Risk phrases:

Irritant

Extremely flammable

Extremely flammable.

Irritating to eyes and respiratory system.

Keep out of the reach of children. Safety phrases: Keep in a cool place.

(Contd. on page 4)

Printing date 11/13/2008 Reviewed on 11/13/2008

Trade name: STRIPE INVERTED TIP WHITE

(Contd. of page 3)

Keep container in a well-ventilated place.

Keep away from sources of ignition - No smoking.

Do not breathe gas/fumes/vapour/spray.

Avoid contact with skin and eyes.

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

If swallowed, seek medical advice immediately and show this container or label.

Use only in well-ventilated areas.

Special labeling of certain preparations:

Keep out of the reach of children.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact:

Regulatory Affairs

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IATA. International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) VOC: Volatile Organic Compounds (USA, EU)





Protective Marine **Coatings**

COROTHANE® PREPRIME

B65C10

Revised 8/09

PRODUCT INFORMATION

5.09

PRODUCT DESCRIPTION

COROTHANE I PREPRIME is a clear, single component, low VOC, moisture curing, urethane primer. It has excellent surface wetting properties and can be applied to sound, rusted surfaces with minimal surface preparation.

- · Excellent adhesion to most substrates
- Low temperature application down to 20°F (-7°C)
- Excellent durability
- Outstanding abrasion resistance
- Excellent corrosion and chemical resistance
- Outstanding application properties

PRODUCT CHARACTERISTICS Finish: Semi-Gloss

Color: Clear / Amber Cast

Volume Solids: 62% ± 2%

Weight Solids: 68% ± 2%

VOC (calculated): <340 g/L; 2.80 lb/gal

Recommended Spreading Rate per coat:

	Minimum	m Maximum	
Wet mils (microns)	2.5 63	3.0 75	
Dry mils (microns)	1.5 40	2.0 50	
~Coverage sq ft/gal (m²/L)	497 12.2	663 16.2	
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	992 24.3		

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 3.0 mils wet (75 microns):

	@ 55°F/13°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	3 hours	1.5 hours	20 minutes
To recoat:			
minimum:	8 hours	3.5 hours	1 hour
maximum:	30 days	30 days	15 days
To cure:	4 days	3 days	1 day
Abrade su		n recoat time is e	

Shelf Life: 12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: 105°F (41°C), PMCC Reducer/Clean Up: Reducer #15, R7K15

RECOMMENDED USES

For use over prepared surfaces in industrial environments:

- · Heavy duty interior and exterior primer coating
- Universal primer for marginally prepared surfaces, old paint, tightly adherent rust, weathered galvanized steel, and con-
- Suitable for use in USDA inspected facilities

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	88 mg loss
Direct Impact Resistance	ASTM D2794	40 in. lbs.
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes

- Excellent surface wetting properties
- Can be applied over sound, tight, rusted surfaces
- Outstanding adhesion to steel and concrete
- Ideal for overcoating previous coatings



Protective & Marine Coatings

COROTHANE® I PREPRIME

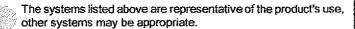
B65C10

PRODUCT INFORMATION

5.09

RECOMMENDED SYSTEMS

		Dry Film T	hickness / ct.
		Mils	(Microns)
Steel:			
1 ct.	Corothane I PrePrime	1.5-2.0	(40-50)
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1 ct.	Corothane I Aliphatic Finish Coa	1 2.0-3.0	(50-75)
or	Corothane I HS	2.0-3.0	(50-75)
Steel:			
1 ct.	Corothane I PrePrime	1.0-1.5	(25-40)
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Conci	rete, smooth:		
1 ct.	Corothane PrePrime	1_0-1.5	(25-40)
2 cts.	Corothane I Aliphatic Finish Coa	t 2.0-3.0	(50-75)



SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

Iron & Steel: SSPC-SP2 or SP3

Concrete & Masonry: SSPC-SP13/NACE 6, or ICRI 03732,

CSP 1-3

dish Std.	
055900 SSPC	NACE
SP 5	1
2.5 SP 10	5
SP <u>5</u>	3
, SE (4
2 SP Z	-
5 255	-
3. SP 3	. -
	SP 5 SP 10 SP 6 SP 7 SP 2 SP 2 SP 2 SP 3

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:

air and surface:

20°F (-7°C) minimum, 100°F (38°C)

maximum

material:

45°F (7°C) minimum

Do not apply over surface ice

Relative humidity:

30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

1 gallon (3.78L) and 5 gallon (18.9L)

containers

Weight:

8.7 ± 0.2 lb/gal; 1.0 Kg/L

SAFETY PRECAUTIONS

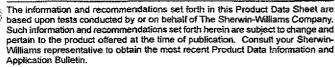
Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

DISCLAIMER



www.sherwin-williams.com/protective



COROTHANE® I PREPRIME

B65C10

Revised 8/09

APPLICATION BULLETIN

5.09

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Iron & Steel

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910.

Always follow the standard methods listed below:

ASTM D4258 Standard Practice for Cleaning Concrete. ASTM D4259 Standard Practice for Abrading Concrete. ASTM D4260 Standard Practice for Etching Concrete. ASTM F1869 Standard Test Method for Measuring Moisture Vapor

Emission Rate of Concrete. SSPC-SP 13/Nace 6 Surface Preparation of Concrete.

ICRI 03732 Concrete Surface Preparation.

	Surface Pre	paration Sta	ndards		
	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal Near White Metal		Sa 3 Sa 2.5	Sa 3 Sa 2.5	SP 5 SP 10	1 2
Commercial Blast Brush-Off Blast		Sa 2 Sa 1	Sa 2 Sa 1	SP 6 SP 7	3 4
Hand Tool Cleaning	Rusted Pitted & Rusted	CSi 2 DSi 2	ČSI 2 DSI 2	SP 2 SP 3 SP 3 SP 3	Í
Power Tool Cleaning	Occasional	C St 3 D St 3	C St 3 D St 3	SP3 SP3	<u>-</u>

APPLICATION CONDITIONS

Temperature:

air and surface:

20°F (-7°C) minimum, 100°F (38°C)

maximum

material:

45°F (7°C) minimum

Do not apply over surface ice

Relative humidity:

30% minimum, 99% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean UpReducer #15, R7K15

Airless SprayNot recommended

Conventional Spray

Unit	Graco	Binks
Gun		95
Fluid Nozzle	070	66/65
Air Nozzle	947	66PR
Atomization Press	60-70 psi	60-70 psi
Fluid Pressure	15-20 psi	15-20 psi
Reduction	As needed up	

Brush

BrushNatural bristle

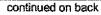
ReductionAs needed up to 10% by volume

Roller

Cover _____1/4" natural or synthetic with solvent resistant core

Reduction.....As needed up to 10% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.





Protective & Marine Coatings

COROTHANE® I PREPRIME

B65C10

APPLICATION BULLETIN

5.09

APPLICATION PROCEDURES

Surface preparation must be completed as indicated,

Mix material thoroughly prior to use with a low speed power agitator. Filter slowly through a 55 mesh screen.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Mini	mum	Maxi	mum	
Wet mils (microns)	2.5	63	3.0	3.0 75	
Dry mils (microns)	1.5	40	2.0	50	
~Coverage sq ft/gal (m²/L)	497	12.2	663	16.2	
Theoretical coverage sq ft/gal	992	24.3			

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 3.0 mils wet (75 microns):

	@ 55°F/13°C	@ 77°F/25°C 50% RH	@ 100°F/38°C
To touch:	3 hours	1.5 hours	20 minutes
To recoat:			
minimum:	8 hours	3.5 hours	1 hour
maximum:	30 days	30 days	15 days
To cure:	4 days	3 days	1 day
About au	rfano if movimus	a canant tima in a	vocadad

Abrade surface if maximum recoat time is exceeded. Drying time is temperature, humidity, and film thickness dependent.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Corothane KA Accelerator is acceptable for use. See data page 5.98 for details.

It is recommended that partially used cans not be sealed/closed for use at a later date.

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures, Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

CLEAN UP INSTRUCTIONS

Clean spills and splatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. Follow manufacturer's safety recommendations when using any solvent.

DISCLAIMER

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www.sherwin-williams.com/protective

MATERIAL SAFETY DATA SHEET

B65C10 08 00 DATE OF PREPARATION Apr 5, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B65C10

PRODUCT NAME

COROTHANE® I - Preprime, Clear

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902
	www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
*for Chemical Emergency ONLY (spi	ill, leak, fire, exposure, or accident)

		N ON INGRE	

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
10	64742-95-6	Light Aromatic Hydrocar	bons	
		ACGIH TLV	Not Available	3.8 mm
		OSHA PEL	Not Available	
2	98-82-8	Cumene		· · · · · · · · · · · · · · · · · · ·
		ACGIH TLV	50 PPM	10 mm
		OSHA PEL	50 PPM	
1	526-73-8	1,2,3-Trimethylbenzene		· · · · · · · · · · · · · · · · · · ·
		ACGIH TLV	Not Available	0.931 mm
		OSHA PEL	Not Available	
4	108-67-8	1,3,5-Trimethylbenzene		
		ACĞIH TLV	25 PPM	2 mm
		OSHA PEL	25 PPM	
14	95-63-6	1,2,4-Trimethylbenzene		
		ACĞIH TLV	25 PPM	2.03 mm
		OSHA PEL	25 PPM	
9	101-68-8	4, 4'-Diphenylmethane Di	isocyanate	
		ACGIH TLV	0.005 PPM	
		OSHA PEL	0.02 PPM CEILING	
7	26447-40-5	Diphenylmethane Diisocy	/anate	
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
46	9016-87-9	Diphenylmethane Diisocy	anate Polymer	
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

HMIS Codes
Health 3*
Flammability 2
Reactivity 1

B65C10

- the liver
- . the urinary system
- the reproductive system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause altergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 - FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later,

IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT LEL UEL FLAMMABILITY CLASSIFICATION

105 °F PMCC 0.7 7.0 Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- . Remove all sources of ignition. Ventilate the area.
- . All personnel in the area should be protected as in Section 8.
- Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

SECTION 7—HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction).

page 2 of 5



VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturers directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 8.57 lb/gal

1027 g/t

SPECIFIC GRAVITY 1.03

305 - 360 °F **BOILING POINT**

151 - 182 °C

MELTING POINT Not Available

VOLATILE VOLUME 37%

EVAPORATION RATE Slower than ether Heavier than air

VAPOR DENSITY

SOLUBILITY IN WATER N.A.

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

2.73 lb/gal 327 g/l Less Water and Federally Exempt Solvents

2.73 lb/gal 327 g/l Emitted VOC



STABILITY - Stable **CONDITIONS TO AVOID**

None known

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, possibility of Hydrogen Cyanide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.



CAS No.	Ingredient Name			
64742-95-6	Light Aromatic Hydrocarbons			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
98-82-8	Cumene			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		1400 mg/kg	
526-73-8	1,2,3-Trimethylbenzene			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
108-67-8	1,3,5-Trimethylbenzene			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
95-63-6	1,2,4-Trimethylbenzene			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
101-68-8	4, 4'-Diphenylmethane Dilsocyanate			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
26447-40-5	Diphenylmethane Diisocyanate			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
9016-87-9	Diphenylmethane Diisocyanate Polymer			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container, Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.

UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (41 C c.c.), EmS F-E, S-E, ADR (D/E)

SECTION 15 - REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
98-82-8	Cumene	2	
95-63-6	1,2,4-Trimethylbenzene	14	
101-68-8	4, 4'-Diphenylmethane Diisocyanate	9	
9016-87-9	Diphenylmethane Diisocyanate Polymer	46	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA inventory.



SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially after the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.





COROTHANE® I **ALIPHATIC FINISH COAT**

B65-10 SERIES

Revised 10/09

PRODUCT INFORMATION

5.05

PRODUCT DESCRIPTION

COROTHANE I ALIPHATIC FINISH COAT is a single component, low VOC, moisture curing urethane designed for low temperature or high humidity applications while providing UV resistance and chemical resistance equivalent to two part urethane coatings.

- Low temperature application down to 20°F (-7°C)
- Excellent resistance to yellowing, chalking, or degradation by sunlight
- · Excellent adhesion to most surfaces
- · Superior abrasion resistance
- · Excellent adhesion directly to clean concrete
- Outstanding chemical resistance
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:

Gioss

Color:

Wide range of colors available

Volume Solids:

52% ± 2%, may vary by color

VOC (calculated):

<420 g/L; 3.5 lb/gal

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.0 100	6.0 150
Dry mils (microns)	2.0 50	3.0 75
~Coverage sq ft/gal (m²/L)	278 6.8	417 10.2
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	832 20.4	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 i	nils wet (100	microns):
@ 40°F/4.5°C	@ 77°F/25°C	@ 100°F/38°C

	_	50% RH	_
To touch:	4 hours	1 hour	40 minutes
To recoat:			
minimum:	18 hours	4 hours	4 hours
maximum:	30 days	14 days	14 days
To cure:	8 days	3 days	3 days

If maximum recoat time is exceeded, abrade surface before recoating. Drying time is temperature, humidity, and film thickness dependent.

Shelf Life:

12 months, unopened Store indoors at 40°F (4.5°C) to

100°F (38°C).

(Tinted colors must be used within 7 days after tinting)

Flash Point:

>93°F (33.8°C), PMCC

Reducer/Clean Up:

Reducer #15, R7K15 Reducer 100, R7K100

RECOMMENDED USES

- Color coat for where maximum color and gloss retention are required
- Chemical resistant coating for metallized surfaces and tanks
- Chemical resistant floor coating
- Marine applications
- Suitable for use in USDA inspected facilities
- Meets requirements of SSPC Paint 38, Level III
- Conforms to AWWA D102-03 OCS #2

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

ct. Corothane I GalvaPac Zinc Primer @ 3.0 mils (75 microns) dft 1 ct. Corothane I Aliphatic @ 2.0 mils (50 microns) dft funless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	24 mg loss
Adhesion	ASTM D4541	946 psi
Corrosion Weathering (Zinc Primer/Mastic/ Aliphatic Finish)	ASTM D5894, 3024 hours, 9 cycles	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Direct Impact Resistance	ASTM D2794	160 in. lbs.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Flexibility	ASTM D522, 180° bend, 1/8" mandrel	Passes
Moisture Condensa- tion Resistance	ASTM D4585, 100°F (38°C), 1000 hours	Passes
Pencil Hardness	ASTM D3363	2H
Salt Fog Resistance (Zinc Primer/Mastic/ Aliphatic Finish)	ASTM B117; 3000 hours	Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D610 for rusting
Wet Heat Resistance	Non-immersion	180°F (82°C)

Meets requirements of SSPC Paint 38, Level III.

continued on back



Protective Marine Coatings

COROTHANE® I **ALIPHATIC FINISH COAT**

B65-10 SERIES

PRODUCT INFORMATION

5.05

RECOMMENDED SYSTEMS

~ .	Di	ry Film Thick <u>Mils</u>	ness / ct. (Microns)
Steel: 1 ct. 1-2 cts.	Corothane I GalvaPac Zinc Primer Corothane I Aliphatic Finish Coat	r 3.0-4.0 2.0-3.0	(75-100) (50-75)
Steel: 1 ct. 1 ct. 1 ct.	Corothane I GalvaPac Zinc Primer Corothane I Ironox B Corothane I Aliphatic Finish Coat	r 3.0-4.0 3.0-5.0 2.0-3.0	(75-100) (75-125) (50-75)
Steel: 1 ct. 1 ct. 1 ct. 1 ct.	Corothane I PrePrime Corothane I MIO-Aluminum Corothane I Ironox B Corothane I Aliphatic Finish Coat	1.0-1.5 2.0-3.0 3.0-5.0 2.0-3.0	(25-40) (50-75) (75-125) (50-75)
1 ct	Epoxy Primer): Dura-Plate 235 Corothane I Aliphatic Finish Coat	4.0-8.0 2.0-3.0	(100-200) (50-75)
Concre 1 ct. 1 ct.	te, smooth: Corothane I PrePrime Corothane I Aliphatic Finish Coat	1.0-1.5 2.0-3.0	(25-40) (50-75)

Concrete, smooth:

Corothane | Aliphatic Finish Coat 2.0-3.0 (50-75)2 cts.

Concrete Floors, rough:
On deeply profiled or damaged concrete floor:
1 ct. Kem Cati-Coat HS Epoxy 16 10.0-30.0 (250-750) Filler/Sealer as required to fill voids and provide a continuous substrate. 1-2 cts. Corothane I Aliphatic Finish Coat 2.0-3.0 (50-75)

Previously Painted Surfaces:

Spot prime bare steel with 1 coat of Corothane I GalvaPac Zinc Primer Corothane I Aliphatic Finish Coat 2,0-3.0 (50-75)2 cts. or Corothane I Ironox B 3.0 - 5.0(75-125) 1 ct. Corothane I Aliphatic Finish Coat 2.0-3.0 (50-75)1 ct. (Check compatibility)

The systems listed above are representative of the product's use, other systems may be appropriate.

DISCLAIMER

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SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

* Iron & Steel: SSPC-SP6/NACE 3
Concrete: SSPC-SP13/NACE 6, or ICRi
03732, CSP 1-3 Previously Painted: SSPC-SP2 or SP3

Primer required

Surface Preparation Standards					
	Condition of Surface	ISO 8501-1 BS7079:A1	Swodish Std. SIS055900	SSPC	NACE
White Metal		§a 3 _	Şa3_	SP 5 SP 10	1
Near White Metal Commercial Blast		Sa 2.5 Sa 2	Sa 2.5 Se 2	SP 10	3
Brush-Olf Blast		Şã 1	Sa 1	ŠP 7	4
Hand Tool Cleaning	Rusted Pitted & Rusted	C St 2	C St 2	SP 2	-
Power Tool Cleaning		ČŠ:3 DS:3	C \$13 O \$13	5P-72 5P-22 5P-P-P-P-23 5P-P-P-P-23	

TINTING

Tint B65W16 and B65T14 only with Maxitoner colorants, 100% tint strength. Product to be used within 7 days after tinting.

APPLICATION CONDITIONS

Temperature:

air and surface:

20°F (-7°C) minimum, 100°F (38°C) maximum 45°F (7°C) minimum Do not apply over surface ice 30% minimum, 99% maximum

material:

Relative humidity:

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

1 gallon (3.78L) and 5 gallon (18.9L)

containers

Weight:

9.0 to 11.0 ± 0.2 lb/gal; 1.1 Kg/L

may vary by color

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED. STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MER-CHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



COROTHANE® I **ALIPHATIC FINISH COAT**

B65-10 SERIES

Revised 10/09

APPLICATION BULLETIN

5.05

to

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

fron & Steel

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same days at the stage of the same days at th day as it is cleaned.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

Always follow the industry standards listed below: ASTM D4258 Standard Practice for Cleaning Concrete. ASTM D4259 Standard Practice for Abrading Concrete. ASTM D4260 Standard Practice for Etching Concrete. ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.

SSPC-SP13/NACE 6 Surface Preparation of Concrete ICRI 03732 Concrete Surface Preparation

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards					
	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal		Şa3	Sa 3 Sa 2.5 Sa 2 Sa 1	SP 5	1
Near White Metal Commercial Blast		Sa 2.5 Sa 2	Sa 2.5	50 50 50 50 50 50 50 50 50 50 50 50 50 5	2 3
Brush-Off Blast		Sa 1	Ša i	ŠP 7	4
Hand Tool Cleaning	Rusted	C St 2	ÇŞt2	SP 2	-
	Pitted & Rusted	D St 2 C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted	D St 3	ĎŠi 3	<u> </u>	<u>~</u>

APPLICATION CONDITIONS

Temperature: air and surface:

20°F (-7°C) minimum, 100°F (38°C)

maximum 45°F (7°C) minimum

Do not apply over surface ice

Relative humidity:

material:

30% minimum, 99% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean UpReducer #15, R7K15 (Spray)

Reducer #100, R7K100 (Brush and

Roller)

Airless Spray

Pump	30:1
Pressure	1800 - 2000 psi
Hose	1/4" ID
Tip	011"015"
Filter	60 mesh
Reduction	Reducer R7K15, as needed up
	10% by volume

Conventional Spray

Unit	Graco	Binks
Gun		95
Fluid Nozzle	070	66/65
Air Nozzie	947	66PR
Atomization Pressure	60-70 psi	60-70 psi
Fluid Pressure		
Reduction	Reducer R7K15,	as needed up to
	10% by volume	-

Brush

Brush	Natural bristle
Reduction	Reducer R7K100
	as needed up to 10% by volume

Roller

Cover	1/4" natural or synthetic with
	solvent resistant core
Reduction	Reducer R7K100
	as needed up to 10% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.

continued on back



Protective & Marine Coatings

COROTHANE® I ALIPHATIC FINISH COAT

B65-10 SERIES

APPLICATION BULLETIN

5.05

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix paint thoroughly prior to use with a low speed power agitator. Filter slowly through a 55 mesh screen.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Mini	imum	Maxi	mum
Wet mils (microns)	4.0	100	6.0	150
Dry mils (microns)	2.0	50	3.0	75
~Coverage sq ft/gal (m²/L)	278	6.8	417	10.2
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	832	20.4		

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 4.0 mils wet (100 microns):

	@ 40°F/4.5°C	@ 77°F/25°C	@ 100°F/38°C
To touch:	4 hours	<i>50% RH</i> 1 hour	40 minutes
	4 Hours	i noui	40 Hittinie2
To recoat:			
minimum:	18 hours	4 hours	4 hours
maximum:	30 days	14 days	14 days
To cure:	8 days	3 days	3 days
lf maximum recoat	time is exceeded	l, abrade surface	before recoating.

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

Drying time is temperature, humidity, and film thickness dependent.

PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or celling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

When applying White or light colors of Corothane I - Aliphatic over dark colors or porous surfaces, a minimum of 2 coats is required for adequate hide.

Tinted colors to be used within 7 days after tinting.

Corothane KA Accelerator is acceptable for use. See data page 5.98 for details.

E-Z Roll Urethane Defoamer is acceptable for use. See data page 5.99 for details.

It is recommend that partially used cans not be sealed/closed for use at a later date.

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED. STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. Follow manufacturer's safety recommendations when using any solvent.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication, Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.

www.sherwin-williams.com/protective

MATERIAL SAFETY DATA SHEET

B65W16 10 00 DATE OF PREPARATION Aug 2, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B65W16

PRODUCT NAME

COROTHANE® I-ALIPHATIC Moisture Cure Urethane, Extra White Base

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency	(800) 424-9300
'for Chemical Emergency ONLY (spi	ill, leak, fire, exposure, or accident)

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% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.7	100-41-4	Ethylbenzene	O ING	vapor i ressure
0.7	100-41-4	ACGIH TLV	100 PPM	7.1 mm
		ACGIH TLV	125 PPM STEL	7.4 1001
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
4	1330-20-7	Xylene	12011110122	<u> </u>
•	7000 20	ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
2	64742-94-5	Medium Aromatic H		
_		ACGIH TLV	Not Available	0.12 mm
		OSHA PEL	Not Available	
0.3	91-20-3	Naphthalene		
		ACGIH TLV	10 PPM	1 mm
		ACGIH TLV	15 PPM STEL	
		OSHA PEL	10 PPM	
		OSHA PEL	15 PPM STEL	
10	110-43-0	Methyl n-Amyl Ketor	ne	
		ACGIH TLV	50 PPM	3.855 mm
		OSHA PEL	100 PPM	
1	108-94-1	Cyclohexanone		
		ACGIH TLV	25 PPM (Skin)	2 mm
		OSHA PEL	25 PPM (Skin)	
4	763-69-9	Ethyl 3-Ethoxypropic		
		ACGIH TLV	Not Available	1.11 mm
	 	OSHA PEL	Not Available	
0.1	822-06-0	Hexamethylene Diis		
		ACGIH TLV	0.005 PPM	0.05 mm
		OSHA PEL	Not Available	
4	4083-64-1	p-Toluenesulfonyl is		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
31	28182-81-2	Hexamethylene Dilse		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
7	14808-60-7	Quartz	0.000	
		ACGIH TLV OSHA PEL	0.025 mg/m3 as Resp. Dust 0.1 mg/m3 as Resp. Dust	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Imitation.

SKIN: Prolonged or repeated exposure may cause imitation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

OSHA PEL

ACGIH TLV

OSHA PEL OSHA PEL

13463-67-7 Titanium Dioxide

2 mg/m3 as Resp. Dust

5 mg/m3 Respirable Fraction

10 mg/m3 as Dust 10 mg/m3 Total Dust

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and toss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased affergic reaction on repeated exposure.

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HMIS Codes

Health 3°

Flammability

Reactivity

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

Flush eyes with large amounts of water for 15 minutes. Get medical attention.

Wash affected area thoroughly with soap and water. SKIN:

Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later,

IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT 93 °F PMCC UEL

FLAMMABILITY CLASSIFICATION

LEL 0.8 8.1

RED LABEL -- Flammable, Flash below 100 °F (38 °C)

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention,

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective, if water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- All personnel in the area should be protected as in Section 8.
- Cover spilt with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IC

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally, Keep out of the reach of children.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes, Avoid breathing vapor and spray mist.

Wash hands after using

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturers directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

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B65W16

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 10.66 lb/gal

1277 g/l

SPECIFIC GRAVITY 1.28

BOILING POINT 281 - 415 °F Not Available 138 - 212 °C

MELTING POINT

VOLATILE VOLUME 40%

EVAPORATION RATE

Slower than ether Heavier than air

VAPOR DENSITY

SOLUBILITY IN WATER N.A.

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

2.90lb/gal 347g/l Less Water and Federally Exempt Solvents Emitted VOC

2.90lb/gal 347g/i

SECTION 10 — STABILITY AND REACTIVITY

STABILITY - Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, possibility of Hydrogen Cyanide

HAZÁRDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."



TOYICAL AG	V DATA

CAS No.	Ingredient Name				
100-41-4	Ethylbenzene	**************************************			
	Į.	.C50 RAT	4HR	Not Available	
	L	.D50 RAT		3500 mg/kg	
1330-20-7	Xylene				
		_C50 RAT	4HR	5000 ppm	
	L	D50 RAT		4300 mg/kg	
64742-94-5	Medium Aromatic Hydrocar	bons			
		C50 RAT	4HR	Not Avaitable	
		D50 RAT		Not Available	
91-20-3	Naphthalene				
		C50 RAT	4HR	Not Available	
		_D50 RAT	1.11.	Not Available	
110-43-0	Methyi n-Amyl Ketone	200 1011		.1007.11000000	
ט-טוריטו ו		.C50 RAT	4HR	Not Available	
		D50 RAT	71111	1670 mg/kg	
108-94-1	Cyclohexanone	DOU IVE		1070110770	
100-34-1		.C50 RAT	4HR	8000 ppm	
		.D50 RAT	*HIK	1535 mg/kg	
763-69-9		-D20 KAI		1555 Highty	
/03-03-9	Ethyl 3-Ethoxypropionate	ACO DAT	ALID	Not Available	
		C50 RAT	4HR	7	
		D50 RAT		5000 mg/kg	·····
822-06-0	Hexamethylene Diisocyana		44.45		
		C50 RAT	4HR	Not Available	
		D50 RAT		738 mg/kg	
4083-64-1	p-Toluenesulfonyl Isocyana				
		.C50 RAT	4HR	Not Available	
		.D50 RAT		Not Available	
28182-81-2	Hexamethylene Dilsocyana				
		.C50 RAT	4HR	Not Available	
	L.	.D50 RAT		Not Available	
14808-60-7	Quartz				-
	L	.C50 RAT	4HR	Not Available	
	<u>_</u>	D50 RAT		Not Available	
14807-96-6	Talc				
		.C50 RAT	4HR	Not Available	
		D50 RAT		Not Available	
13463-67-7	Titanium Dioxide		- war-se war		
		C50 RAT	4HR	Not Available	
	-	D50 RAT		Not Available	
	•			A - A - A parallel subtraction	

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

1 Gallon and Less may be Classed as CONSUMER COMMODITY, ORM-D

Larger Containers are Regulated as:

UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Naphthalene 100 lb RQ

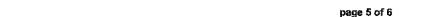
Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

RQ, UN1263, PAÍNT, 3, PĠ İII, (XYLENES (ISOMERS AND MIXTURE)), (ERG#128)

Canada (TDG)

UN1263, PAINT, CLASS 3, PG III, LIMITED QUANTITY, (ERG#128)



IMO

UN1263, PAINT, CLASS 3, PG III, (34 C c.c.), EmS F-E, S-E

SECTION 15—REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.6	
1330-20-7	Xylene	4	
91-20-3	Naphthalene	0.3	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information perfains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.





Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised 11/09

PRODUCT INFORMATION

5.10

PRODUCT DESCRIPTION

COROTHANE I MIO-ALUMINUM is a single component, low VOC, moisture curing, aluminum and Micaceous Iron Oxide (MIO) filled, urethane primer, intermediate coating, or finish. It has excellent surface wetting properties and provides extended recoatability.

- · Excellent adhesion to most substrates
- Low temperature application down to 20°F (-7°C)
- Excellent exterior durability
- · Outstanding abrasion resistance
- Excellent corrosion and chemical resistance
- Recoat up to 30 days
- · Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:

Matte

Color:

Aluminum

Volume Solids:

65% ± 2%

Weight Solids:

77% ± 2%

VOC (EPA Method 24):

Unreduced: <310 g/L; 2.60 lb/gal Reduced 7%: <340 g/L; 2.80 lb/gal

Recommended Spreading Rate per	coat:
Minimum	Maximum

 Wet mils (microns)
 3.0 75
 4.5 112

 Dry mils (microns)
 2.0 50
 3.0 75

 ~Coverage sq ft/gal (m²/L)
 348 8.5
 521 12.8

Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft 1040 25.5

NOTE: Brush or roll application may require multiple coals to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 3.5 mils wet (88 microns):

	@ 40°F/4.5°C	@ 77*F125*C 50% RH	@ 100"F/38"
To touch:	4 hours	2 hours	1 hour
To recoat:			
minimum:	16 hours	7 hours	3 hours
maximum:	30 days	30 days	30 days
To cure:	5 days	3 days	1 day

Abrade surface if maximum recoal time is exceeded. Drying time is temperature, humidity, and film thickness dependent

Shelf Life:

12 months, unopened

Store indoors at 40°F (4.5°C) to

100°F (38°C).

Flash Point:

Reducer/Clean Up:

Spray: Brush and Roll: VOC Exempt: 103°F (39°C), PMCC Reducer #15, R7K15

Reducer #100, R7K100 Reducer R7K111

RECOMMENDED USES

For use over prepared surfaces in industrial environments:

- · Heavy duty interior and exterior structural coating
- High performance, one coat or multiple coat, coating for steel, aluminum, concrete, and most plastics in industrial and marine environments
- Universal primer for poorly prepared surfaces, old paint, tightly adherent rust, weathered galvanized steel, and concrete
- Excellent intermediate coat providing superior adhesion of subsequent coats
- Enhanced film strength and edge protection with aluminum and micaceous iron oxide addition

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

1 ct: Corothane I MIO-Aluminum @ 3.0 mils (75 microns) dft 1 ct: Corothane I IronOx B @ 4.0 mils (100 microns) dft 1 ct: Corothane I Aliphatic @ 3.0 mils (75 microns) dft *unless otherwise noted below

Test Name Test Method Results Adhesion **ASTM D4541** 1000 psi Rating 9 per ASTM ASTM D5894, Corrosion D610 for rusting; 1700 hours, 5 Rating 9 per ASTM Weathering cvcles D714 for blistering Direct Impact **ASTM D2794** 140 in lb Resistance **Dry Heat ASTM D2485** 300°F (149°C) Resistance ASTM D522, 180° Flexibility Passes bend, 1/8" mandrel ASTM D4585, Moisture Conden-100°F (38°C), 300 Passes sation Resistance hours Pencil Hardness **ASTM D3363** 2B Rating 10 per ASTM ASTM B117, 2300 Salt Fog D610 for Rusting; Resistance Rating 10 per ASTM hours D714 for Blistering





Protective Marine **Coatings**

COROTHANE® I MIO-ALUMINUM

B65S14

PRODUCT INFORMATION

5.10

RECOMMENDED SYSTEMS

		Dry Film Thick	ness / ct.
		Mils	(Microns)
Steel:			•
1 ct.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
1 ct.	Corothane I IronOx B	3.0-5.0	(75-125)
1 ct.	Corothane Aliphatic Finish Coat	2.0-3.0	(50-75)
or	Corothane I HS	2.0-3.0	(50-75)
or	Corothane I Ironox A HS	2.5-3.5	(63-88)
Steel:			
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Steel:	Zinc Primer)		
1 ct.	Corothane I GalvaPac Zinc Primer	3.0-4.0	(75-100)
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Concre	ete: (Smooth)		
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)
Concre	ete: (Rough)		

1 ct.	Kem Cati-Coat HS Epoxy Filler/Se	aler 10.0-30.0	(250-750)
	as required to fill voids and provide	e a continuous s	substrate.
2 cts.	Corothane I MIO-Aluminum	2.0-3.0	(50-75)

Galvanized:

1-2 cts, Corothane I MIO-Aluminum	2.0-3.0	(50-75)
(Check Compatibility)		

Aluminum

Addition .		
1-2 cts. Corothane I MIO-Aluminum	2.0-3.0	(50-75)
(Check Compatibility)		

Previously Painted Surfaces:

1-2 cts. Corothane I MIO-Aluminum	2.0-3.0	(50-75)
(Check Compatibility)		

The systems listed above are representative of the product's use, other systems may be appropriate.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:
Iron & Steel: SSPC-SP2/3
Concrete: SSPC-SP13/NACE 6, or ICRI 03732,
CSP 1-3
Galvanized: SSPC-SP1

Aluminum:

Previously Painted -ŠP2 or SP3

Surface Preparation Standards					
	Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS065960	SSPC	NACE
White Metal Near White Metal		Sa 3 Sa 2.5	Sa 3 Sa 2.5	SP 5 SP 10	1 2
Commercial Blast Brush-Off Blast		Sa 2 Sa 1	Sa 2 Sa 1	SP 72223	3 4
Hand Tool Cleaning	Rusled Pitted & Rusted	CSI2 DSI2	C St 2 D St 2	SP 2 SP 2	-
Power Tool Cleaning	Rusted Pitted & Rusted	C \$13 D \$13	C SI 3 D SI 3	SP3 SP3	-

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature: air and surface:

20°F (-7°C) minimum, 100°F (38°C)

material:

maximum 45°F (7°C) minimum

Do not apply over surface ice

Relative humidity:

30% minimum, 99% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

1 gallon (3.78L) and 5 gallon (18.9L)

containers

Weight:

10.5 ± 0.2 lb/gal; 1.26 Kg/L

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions

WARRANTY

The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defec-LIBBING FOR PRODUCTS PROVED GREECEVE, IT AIM, IS INTITIED TO PERIOD THE GREECE THE OF THE GREECE AND FOR THE FORMAT OF THE GREECE AND FORMAT OF THE GREECE AND FORMAT OF THE GREECE AND FORMAT OF THE CHARLES FOR A PARTICULAR PURPOSE.

DISCLAIMER

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www.sherwin-williams.com/protective



Protective Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

Revised 11/09

APPLICATION BULLETIN

5.10

SURFACE PREPARATIONS

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Hand/ Power Tool

per SSPC-SP2/3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/ NACE 2. Coat any bare steel the same day as it is cleaned or before flash rusting occurs.

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Remove Allow to weather a minimum of six months prior to coating. Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty gaivanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned.

Concrete and Masonry
For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI
03732, CSP 1-3. Surfaces should be thoroughly clean and dry.
Concrete and mortar must be cured at least 28 days @ 75°F (24°C).
Remove all loose mortar and foreign material. Surface must be
free of laitance, concrete dust, dirt, form release agents, moisture
curing membranes, loose cement and hardeners. Fill bug holes,
air pockets and other voids with Steel-Seam FT910.

Always follow the standard methods listed below: ASTM D4258 Standard Practice for Cleaning Concrete. ASTM D4259 Standard Practice for Abrading Concrete. ASTM D4260 Standard Practice for Etching Concrete.

ASTM F1869 Standard Test Method for Measuring Moisture Vapor

Emission Rate of Concrete. SSPC-SP 13/Nace 6 Surface Preparation of Concrete. ICRI 03732 Concrete Surface Preparation.

Previously Painted Surfaces
If in sound condition, clean the surface of all foreign material.
Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards					
	Condition of Surface	ISO 8501-1 B\$7079:A1	Swodish Std. SIS055900	SSPC	NACE
White Metal Near White Metal Commercial Blast Brush-Off Blast		Sa 3 Sa 2.5 Sa 2 Sa 1	Sa 3 Sa 2,5 Sa 2 Sa 1	SP 5 SP 10 SP 6 SP 7 SP 2 SP 2	1 2 3
Hand Tool Cleaning	Rusted Pitted & Rusted	CSI2 DSI2	C St 2 D St 2 C St 3	SP 2 SP 2	-
Power Tool Cleaning	Rusted Pitted & Rusted	C St 3 D St 3	C St 3 D St 3	SP3 SP3	-

APPLICATION CONDITIONS

Temperature:

air and surface:

20°F (-7°C) minimum, 100°F (38°C)

maximum

material:

45°F (7°C) minimum

Do not apply over surface ice

Relative humidity:

30% minimum, 99% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reducer/Clean Up

Spray	.,Reducer#15, R7K15
Brush and Roll	Reducer #100, R7K100
VOC Exempt	Reducer R7K111

Airless Spray

minoso opinj	
Pump	30:1
Pressure	1800 - 2000 psi
Hose	1/4" ID
Tip	015"019"
Filter	60 mesh
Reduction	As needed up to 10% by volume

Conventional Spray

Unit	Graco	Binks
Gun	900	95
Fluid Nozzle	070	66/65
Air Nozzle	947	66PR
Atomization Press	60-70 psi	60-70 psi
Fluid Pressure	15-20 psi	15-20 psi
Reduction		to 10% by volume

Brush

Brush	Natural bristle
Reduction	As needed up to 10% by volume

Roller

Cover	1/4" natural or synthetic with solvent
	resistant core
Reduction	As needed up to 10% by volume

If specific application equipment is not listed above, equivalent equipment may be substituted.

continued on back



Protective & Marine Coatings

COROTHANE® I MIO-ALUMINUM

B65S14

APPLICATION BULLETIN

5.10

APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix material thoroughly prior to use with a low speed power agitator. Filter slowly through a 55 mesh screen.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	3.0 75	4.5 112
Dry mils (microns)	2.0 50	3.0 75
~Coverage sq ft/gal (m²/L)	348 8.5	521 12.8
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1040 25.5	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 3.5 mils wet (88 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 100°F/38°C	
To touch:	4 hours	2 hours	1 hour	
To recoat:				
minimum:	16 hours	7 hours	3 hours	
maximum:	30 days	30 days	30 days	
To cure:	5 days	3 days	1 day	
Abrade surface if maximum recoat time is exceeded.				
Drying time is ten	nperature, humidi	ity, and film thickn	iess dependent.	

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle.

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Excessive reduction of material can affect film build, appearance, and adhesion.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #15, R7K15.

Pour a small amount of Reducer #15, R7K15 over the top of the paint in the can to prevent skinning or gelling.

Place a temporary cover over the pail to keep excessive moisture, condensation, fog, or rain from contaminating the coating.

Corothane KA Accelerator is acceptable for use. See data page 5.98 for details.

It is recommended that partially used cans not be sealed/closed for use at a later date.

Refer to Product Information sheet for additional performance characteristics and properties.

SAFETY PRECAUTIONS

Refer to the MSDS sheet before use.

Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.

WARRANTY

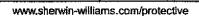
The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

CLEAN UP INSTRUCTIONS

Clean spills and splatters immediately with Reducer #15, R7K15. Clean tools immediately after use with Reducer #15, R7K15. Follow manufacturer's safety recommendations when using any solvent.

DISCLAIMER

The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Information and Application Bulletin.



MATERIAL SAFETY DATA SHEET

B65S14 10 00 DATE OF PREPARATION Aug 2, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B65S14

PRODUCT NAME

COROTHANE® I - Aliphatic Finish Coat, MIO/Aluminum

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

101 Prospect Avenue N.W.

Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902
	www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency'	(800) 424-9300
*for Chemical Emergency ONLY (sp.	ill, leak, fire, exposure, or accident)

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
3	64742-88-7	Mineral Spirits	***************************************	
		ACGIH TLV	100 PPM	2 mm
		OSHA PEL	100 PPM	
5	64742-95-6	Light Aromatic Hydro	carbons	
		ACGIH TLV	Not Available	3.8 mm
	····	OSHA PEL	Not Available	
1	98-82-8	Cumene		
-		ACGIH TLV	50 PPM	10 mm
		OSHA PEL	50 PPM	
3	108-67-8	1,3,5-Trimethylbenzer		
		ACGIH TLV	25 PPM	2 mm
		OSHA PEL	25 PPM	
8	95-63-6	1,2,4-Trimethylbenzer		
		ACGIH TLV	25 PPM	2.03 mm
	·	OSHA PEL	25 PPM	
2	64742-94-5	Medium Aromatic Hyd		
		ACGIH TLV	Not Available	0.12 mm
	···	OSHA PEL	Not Available	
0.4	91-20-3	Naphthalene		
		ACGIH TLV	10 PPM	1 mm
		ACGIH TLV	15 PPM STEL	
		OSHA PEL	10 PPM	
·		OSHA PEL	15 PPM STEL	
3	101-68-8	4, 4'-Diphenylmethane		
		ACGIH TLV	0.005 PPM	
		OSHA PEL	0.02 PPM CEILING	
3	26447-40-5	Diphenylmethane Dils		
		ACGIH TLV	Not Available	
	www.i	OSHA PEL	Not Available	
20	9016-87-9			
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
14	Proprietary	Toluene Diisocyanate		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
9	14808-60-7	Quartz		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	



SECTION 3—HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death,

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later,

IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT

LEL

FLAMMABILITY CLASSIFICATION

105 °F PMCC 0.7 7.0 Combustible, Flash above 99 and below 200 °F

HEt.

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent, Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- · Remove all sources of ignition. Ventilate the area.
- All personnel in the area should be protected as in Section 8.
- Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After 10 minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

page 2 of 5

HMIS Codes

Health 3"

Flammability 2

Reactivity



PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for ruisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturers directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone, NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 10.47 lb/gal

SPECIFIC GRAVITY 1.26

300 - 415 °F **BOILING POINT**

MELTING POINT Not Available

VOLATILE VOLUME 35%

EVAPORATION RATE Slower than ether

VAPOR DENSITY Heavier than air

SOLUBILITY IN WATER NA

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

2.49lb/gal

298g/l

Less Water and Federally Exempt Solvents

1254 g/l

148 - 212 °C

2.49lb/gal **Emitted VOC** 298g/l

SECTION 10 — STABILITY AND REACTIVITY

STABILITY - Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

Contamination with Water, Alcohols, Amines and other compounds which react with isocyanates, may result in dangerous pressure in, and possible bursting of, closed containers.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Nitrogen, possibility of Hydrogen Cyanide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

TOYICOL	OCV	DATE	
	E + - Y	1 144 1 43	

CAS No.	Ingredient Name					
64742-88-7	Mineral Spirits					
	•	LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
64742-95-6	Light Aromatic Hydrocarbons					
	-	LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
98-82-8	Cumene					
		LC50 RAT	4HR	Not Available		
		LD50 RAT		1400 mg/kg		
108-67-8	1,3,5-Trimethylbenzene					
	-	LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
95-63-6	1,2,4-Trimethylbenzene	!				
	-	LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
64742-94-5	Medium Aromatic Hydr	ocarbons				
		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
91-20-3	Naphthalene				, , , , , , , , , , , , , , , , , , , ,	
		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
101-68-8	4, 4'-Diphenylmethane	Diisocyanate				
		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
26447-40-5	Diphenylmethane Diiso	cyanate				
		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
9016-87-9	Diphenylmethane Diiso	cyanate Polymer				
		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
Proprietary	Toluene Diisocyanate F					
•		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		
14808-60-7	Quartz					
		LC50 RAT	4HR	Not Available		
		LD50 RAT		Not Available		

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Naphthalene 100 lb RQ

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.

UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (41 C c.c.), EmS F-E, S-E



SECTION 15 - REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
98-82-8	Currene	<u> </u>	
95-63-6	1,2,4-Trimethylbenzene	[8	
91-20-3	Naphthalene	0.3	
101-68-8	4, 4'-Diphenylmethane Diisocyanate	3	
9016-87-9	Diphenylmethane Dilsocyanate Polymer	20	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially after the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.





20000 02 00 DATE OF PREPARATION Sep 9, 2008

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

20000

PRODUCT NAME

TRI-FLOW™ Superior Lubricant with PTFE

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

Consumer Group - Industrial

Cleveland, OH 44115

Telephone Numbers and Websites

	Regulatory Information	(216) 566-2902	
ı		www.paintdocs.com	
	Medical Emergency	(216) 566-2917	
[Transportation Emergency*	(800) 424-9300	
I	*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)		

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight CAS Numl	oer Ingredient	Units	- Vapor Pressure
10 74-9	3-6 Propane		
	ACGIH TLV	2500 PPM	760 mm
	OSHA PEL	1000 PPM	
10 106-9	7-8 Butane		
	ACGIH TLV	800 PPM	760 mm
	OSHA PEL	800 PPM	
24 64742-4	7-8 Heavy Aliphatic Solve	ent	
	ACGIH TLV	Not Available	1.53 mm
	OSHA PEL	Not Available	
41 64742-5	2-5 Heavy Naphthenic Pe	troleum Oil	
	ACGIH TLV	5 mg/m3 as Mist	
	OSHA PEL	5 mg/m3 as Mist	
2 64741-9	7-5 Naphthenic Oil		
	ACGIH TLV	5 mg/m3 as Mist	
	OSHA PEL	Not Available	
3 64742-6	5-0 Heavy Paraffinic Oil		
	ACGIH TLV	5 mg/m3 as Mist	
	OSHA PEL	5 mg/m3 as Mist	
2 34590-9			
	ACGIH TLV	100 ppm (Skin)	0.4 mm
	ACGIH TLV	150 ppm (Skin) STEL	
	OSHA PEL	100 ppm (Skin)	
	OSHA PEL	150 ppm (Skin) STEL	
2 628-63	• • • • • • • • • • • • • • • • • • • •		
	ACGIH TLV	100 PPM	4 mm
	OSHA PEL	100 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.



SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT LEL UEL EXTINGUISHING MEDIA

Propellant < 0° F 0.6 14.0 Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

· Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.



SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 6.50 lb/gal

778 g/l

SPECIFIC GRAVITY 0.78

<0 - 500° F **BOILING POINT**

<-18 - 260° C

MELTING POINT Not Available

VOLATILE VOLUME 56%

EVAPORATION RATE Faster than ether

VAPOR DENSITY Heavier than air

SOLUBILITY IN WATER N.A.

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 48.20%

Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

74-98-6	Propane			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
106-97-8	Butane			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
64742-47-8	Heavy Aliphatic Solvent			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
64742-52-5	Heavy Naphthenic Petroleum Oil			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
64741-97-5	Naphthenic Oil			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
64742-65-0	Heavy Paraffinic Oil			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		Not Available	
34590-94-8	2-Methoxymethylethoxypropanol			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		5135 mg/kg	
628-63-7	Amyl Acetate			
	LC50 RAT	4HR	Not Available	
	LD50 RAT		6500 mg/kg	

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.



Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.



SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Barium Compound	2	0.06

CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.



The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



MATERIAL SAFETY DATA SHEET

B69V11 04 00



Sectio	1 1 PRODUCT AND COMP	ANY IDENTIFICATION
PRODUCT NUMBER	DATE OF PRE	PARATION HMIS CODES Health 2
B69V11	17-JUN	-08 Flammability 0 Reactivity 0
PROBLICT NAME ZINC CLAD [©] (XI	Water Based Inorganic	Zinc Silicate Coating (Part E)

MANUESCUIPEP'S NAME

THE SHERWIN-WILLIAMS COMPANY 101 Prospect Avenue N.W. Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES

Product Information

www.sherwin-williams.com

Regulatory Information

(216) 566-2902

www.paintdocs.com

Medical Emergency (216) 566-2917

Transportation Emergency (800) 424-9300

for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS % by WT CAS No. INGREDIENT UNITS VAPOR PRESSURE Methoxysilane 1 Proprietary ACGIH TLV Not Available 5 mm OSHA PEL Not Available 18 1312-76-1 Potassium Silicate ACGIH TLV Not Available OSHA PEL Not Available 7631-86-9 Amorphous Silica ACGIH TLV 10 mg/m3 as Dust OSHA PEL mg/m3 as Dust

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

B69V11 page 2

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes.

Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing.

Keep warm and quiet.

INGESTION: Do not induce vomiting.

Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT

LEL

UEL

>200 F PMCC

N.A. N.A.

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IIIB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

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Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction). VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive. PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2. EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 10.00 lb/qal $1198 \, q/l$ SPECIFIC GRAVITY 1.20 BOILING POINT 212 - 215 F 100 - 101 C MELTING POINT Not Available VOLATILE VOLUME 90 % EVAPORATION RATE Slower than ether VAPOR DENSITY Heavier than air SOLUBILITY IN WATER N.A.oН 8.5 VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged) 1.06 lb/gal 127 g/l Less Water and Federally Exempt Solvents

0.11 lb/gal 13 g/l Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

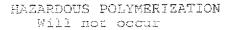
STABILITY -- Stable CONDITIONS TO AVOID

None known. INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide



Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA CAS No. Ingredient Name Proprietary Methoxysilane 4HR RAT Not Available LC50 12500 mg/kg LD50 RAT 1312-76-1 Potassium Silicate 4HR Not Available LC50RAT Not Available LD50 RAT 7631-86-9 Amorphous Silica LC50 RAT 4HR Not Available RAT Not Available

Section 12 -- ECOLOGICAL INFORMATION

LD50

ECOTOKICOLOGICAL INFORMATION No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource

Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

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CAS No.

CHEMICAL/COMPOUND

% by WT % Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

S20848 02 00 DATE OF PREPARATION Sep 7, 2008

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

S20848

PRODUCT NAME

SPRAYON® Flash Free Safety Solvent & Degreaser

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

Consumer Group - Industrial Cleveland, OH 44115

Telephone Numbers and Websites

i ci <u>opinotto ttallibero ana trobotco</u>	
Product Information	(800) 251-2486
Regulatory Information	(216) 566-2902
	www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
for Chemical Emergency ONLY (spill, lea	ak, fire, exposure, or accident)

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
98	79-01-6	Trichloroethylene		
		AČGIH TLV	10 PPM	57.8 mm
		ACGIH TLV	25 PPM STEL	
		OSHA PEL	100 PPM	
3	124-38-9	Carbon Dioxide		
		ACGIH TLV	5000 PPM	760 mm
		OSHA PEL	5000 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, cardiovascular, nervous and respiratory systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

HMIS Codes

0

Health 2*

Flammability

Reactivity

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT

LEL

EXTINGUISHING MEDIA

Not Applicable

N.A.

N.A. Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

UEL

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist,

Wash hands after using.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 12.04 lb/gal

1442 g/l

SPECIFIC GRAVITY 1.45

BOILING POINT <0 - 188° F

<-18 - 86° C

MELTING POINT Not Available

VOLATILE VOLUME 100%

EVAPORATION RATE Faster than ether

VAPOR DENSITY Heavier than air

SOLUBILITY IN WATER N.A.

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 97.50%

Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable CONDITIONS TO AVOID None known. INCOMPATIBILITY None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Hydrogen Chloride

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Mice exposed to trichloroethylene developed liver tumors in several laboratory studies, however, other animal studies and all human epidemiological studies have found no association between trichloroethylene and cancer.

TOXICOLOGY DATA

CAS No.	Ingredient Name	•		•	
79-01-6	Trichloroethylene				
	·	LC50 RAT	4HR	Not Available	
		LD50 RAT		4920 mg/kg	
124-38-9	Carbon Dioxide			TI FINITE	
		LC50 RAT	4HR	Not Available	
		LD50 RAT		Not Available	

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution. This product contains trichloroethylene, a highly volatile solvent which is a toxic waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. In normal use this chemical will quickly evaporate, however grease or other residue removed by this product may contain sufficient trichloroethylene to be classified as a toxic waste.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, 2.2, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D

UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, CLASS 2.2, LIMITED QUANTITY, EmS F-D, S-U

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
79-01-6	Trichloroethylene	98	

CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially after the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name

: VSI® Circulating Oil 32

Uses

Hydraulic oil

Manufacturer/Supplier

SOPUS Products

PO Box 4427

Houston, TX 77210-4427

USA

MSDS Request

877-276-7285

Emergency Telephone Number

Spill Information

: 877-242-7400

Health Information

877-504-9351

2. COMPOSITION/INFORMATION ON INGREDIENTS

A lubricating grease containing highly-refined mineral oils and additives. The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency	

Appearance and Odour

: May be dyed. Liquid at room temperature. Slight hydrocarbon.

Health Hazards

High-pressure injection under the skin may cause serious

damage including local necrosis.

Safety Hazards

Not classified as flammable but will burn.

Environmental Hazards

Not classified as dangerous for the environment.

Health Hazards

: Not expected to be a health hazard when used under normal

conditions.

Health Hazards

Inhalation

: Under normal conditions of use, this is not expected to be a

Skin Contact

primary route of exposure.

Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil

acne/folliculitis.

Eye Contact

May cause slight irritation to eyes.

Ingestion

Low toxicity if swallowed.

Other Information

High-pressure injection under the skin may cause serious

damage including local necrosis. Used oil may contain harmful

Signs and Symptoms

impurities. : Oil acne/folliculitis signs and symptoms may include formation

of black pustules and spots on the skin of exposed areas. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. Ingestion may result in

nausea, vomiting and/or diarrhoea.

1/8

MSDS_US



VSI® Circulating Oil 32 MSDS# 61360E Version 10.0 Effective Date 07/03/2008

1910.1200

Material Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR

Aggravated Medical Condition

: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

Environmental Hazards Additional Information

Not classified as dangerous for the environment.

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard

Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

Not expected to be a health hazard when used under normal General Information

conditions.

No treatment necessary under normal conditions of use. If Inhalation

symptoms persist, obtain medical advice.

Remove contaminated clothing. Flush exposed area with water Skin Contact

and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of

apparent wounds.

Flush eye with copious quantities of water. If persistent **Eye Contact**

irritation occurs, obtain medical attention.

In general no treatment is necessary unless large quantities Ingestion

are swallowed, however, get medical advice.

Treat symptomatically. High pressure injection injuries require Advice to Physician

prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and

wide exploration is essential.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point

> 130 °C / 266 °F (Pensky-Martens Closed Cup) : Typical 1 - 10 %(V)(based on mineral oil)

Upper / lower Flammability or **Explosion limits**

Auto ignition temperature

> 320 °C / 608 °F

Specific Hazards

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases

(smoke). Carbon monoxide. Unidentified organic and inorganic

compounds.



MSDS US

VSI® Circulating Oil 32 MSDS# 61360E Version 10.0 Effective Date 07/03/2008

1910.1200

Material Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR

Suitable Extinguishing

Media

Unsuitable Extinguishing

Media

Protective Equipment for

Firefighters

Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Do not use water in a jet.

Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

: Avoid contact with skin and eyes. Use appropriate containment Protective measures

to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or

other appropriate barriers.

Slippery when spilt. Avoid accidents, clean up immediately. Clean Up Methods

Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay,

sand or other suitable material and dispose of properly.

Local authorities should be advised if significant spillages **Additional Advice**

cannot be contained.

7. HANDLING AND STORAGE

Use local exhaust ventilation if there is risk of inhalation of **General Precautions**

> vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine

appropriate controls for safe handling, storage and disposal of

this material.

Handling Avoid prolonged or repeated contact with skin. Avoid inhaling

vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment

should be used.

Keep container tightly closed and in a cool, well-ventilated Storage

place. Use properly labelled and closeable containers. Storage

Temperature: 0 - 50 °C / 32 - 122 °F

Recommended Materials For containers or container linings, use mild steel or high

density polyethylene.

Unsuitable Materials

PVC.

Additional Information

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

	10-4	Source	Trees		malm2	Notation
	Material	Source	Type	ppm	mymis	110000
,						

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MSDS_US

1910.1200

Material Safety Data Sheet

Oil mist, mineral Oil mist, mineral

3	ACGIH	TWA(Mist.)	5 mg/m3
	ACGIH	STEL/Mist)	10 ma/m3

Exposure Controls	: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control

airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne

concentrations to be generated.

Personal Protective Equipment Respiratory Protection : Personal protective equipment (PPE) should meet

recommended national standards. Check with PPE suppliers.

No respiratory protection is ordinarily required under normal

conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point

>65 °C (149 °F)].

Hand Protection

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection

Wear safety glasses or full face shield if splashes are likely to

Protective Clothing

: Skin protection not ordinarily required beyond standard issue

Monitoring Methods

work clothes.
Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Environmental Exposure Controls

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local

environmental legislation.



Material Safety Data Sheet

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

May be dyed. Liquid at room temperature.

Odour

Slight hydrocarbon.

Ηq

Not applicable.

Initial Boiling Point and

> 280 °C / 536 °F estimated value(s)

Boiling Range

Freezing Point

Typical -34 °C / -29 °F

Flash point

> 130 °C / 266 °F (Pensky-Martens Closed Cup) Typical 1 - 10 %(V) (based on mineral oil)

Upper / lower Flammability or Explosion limits

Auto-ignition temperature

: > 320 °C / 608 °F

Vapour pressure

: < 0.5 Pa at 20 °C / 68 °F (estimated value(s))

Specific gravity

Typical 1.12

Density

Typical 1,013 g/cm3

Water solubility

Negligible.

n-octanol/water partition

coefficient (log Pow)

> 6 (based on information on similar products)

Vapour density (air=1) Evaporation rate (nBuAc=1)

: > 1 (estimated value(s)) : Data not available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to Avoid

Extremes of temperature and direct sunlight.

Materials to Avoid

Strong oxidising agents.

Hazardous Decomposition Products

Hazardous decomposition products are not expected to form

during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment

Information given is based on data on the components and the

toxicology of similar products.

Acute Oral Toxicity Acute Dermal Toxicity Acute Inhalation Toxicity Expected to be of low toxicity: LD50 > 5000 mg/kg, Rat Expected to be of low toxicity: LD50 > 5000 mg/kg, Rabbit

Not considered to be an inhalation hazard under normal conditions of use.

Skin Irritation

Expected to be slightly imitating. Prolonged or repeated skin

contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

Eye Irritation

Expected to be slightly imitating.

Respiratory Irritation

Inhalation of vapours or mists may cause irritation.

Sensitisation

Not expected to be a skin sensitiser. Not expected to be a hazard.

Repeated Dose Toxicity Mutagenicity

Not considered a mutagenic hazard.

Carcinogenicity

Product contains mineral oils of types shown to be noncarcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the

International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic

effects.

VSI® Circulating Oil 32 MSDS# 61360E Version 10.0 Effective Date 07/03/2008 According to OSHA Hazard Communication Standard, 29 CFR 1910 1200

Material Safety Data Sheet

Reproductive and **Developmental Toxicity** Additional Information

Not expected to be a hazard.

Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible. High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Poorty soluble mixture. May cause physical fouling of aquatic **Acute Toxicity**

organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Liquid under most environmental conditions. Floats on water. If **Mobility**

it enters soil, it will adsorb to soil particles and will not be

mobile.

Expected to be not readily biodegradable. Major constituents Persistence/degradability

are expected to be inherently biodegradable, but the product contains components that may persist in the environment. Contains components with the potential to bioaccumulate.

Bioaccumulation Other Adverse Effects

Product is a mixture of non-volatile components, which are not

expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical

ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Recover or recycle if possible. It is the responsibility of the Material Disposal

waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in

drains or in water courses.

Dispose in accordance with prevailing regulations, preferably **Container Disposal**

> to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Disposal should be in accordance with applicable regional, **Local Legislation**

national, and local laws and regulations.

14. TRANSPORT INFORMATION

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VSI® Circulating Oil 32
MSDS# 61360E
Version 10.0
Effective Date 07/03/2008
According to OSHA Hazard Communication Standard, 29 CFR
1910,1200

Material Safety Data Sheet

US Department of Transportation Classification (49CFR)

This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS

All components listed or

polymer exempt.

TSCA

All components listed.

DSL

All components listed.

SARA Hazard Categories (311/312)

No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating (Health,

: 0, 1, 0

Fire, Reactivity)

MSDS Version Number

: 10.0

MSDS Effective Date

: 07/03/2008

MSDS Revisions

A vertical bar () in the left margin indicates an amendment

from the previous version.

MSDS Regulation

The content and format of this MSDS is in accordance with the

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MSDS_US

VSI® Circulating Oil 32 MSDS# 61360E Version 10.0 Effective Date 07/03/2008 unication Standard, 29 CFR

Material Safety Data Sheet

Effective Date 07/03/2008 According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

MSDS Distribution

OSHA Hazard Communication Standard, 29 CFR 1910.1200.

The information in this document should be made available to

all who may handle the product.

Disclaimer

The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.







The Clorox Company

1221 Broadway Oakland, CA 94612 Tel. (510) 271-7000 2/4/09

Material Safety Data Sheet

Product: CLOROX OXIM		POSE STAIN REMOV		
Description: WHITE CLEAR I	LIQUID			
Other Designations	Distributor Clorox Sales Company 1221 Broadway Oakland, CA 94612		Emergency Telephone Nos. For Medical Emergencies call: (800) 446-1014 For Transportation Emergencies Chemtred (800) 424-9300	
l Health Hazard Data		III Hazardous	Ingredients	
Eye Irritant: Eye contact may result in irritation. This product nydrogen peroxide, which may cause skin irritation or skin who prolonged contact with the concentrated product.		Ingredient Hydrogen peroxide CAS #7722-84-1	Concentration 1-5%	<u>Worker Exposure Limi</u> 1 ppm TLV-TWA, PEL
FIRST AID:		isopropanoi	1-5%	400ppm TLV-TWA
EYE CONTACT: Flush eyes with water for at least 15 minutes objection.	s. Call a	CAS# 67-63-0		500ppm STEL
NGESTION: Drink a glassful of water to dilute. Call a physic		None of the ingredien carcinogen lists.	ts in this product is on the I	ARC, OSHA or NTP
SKIN CONTACT: Rinse thoroughly with water. If irritation per physician.	rsists, call a	TLV-TWA = Threshold Limit Value - Time Weighted Average (ACGIH) PEL = Permissible Exposure Level (OSHA)		
NHALATION: Move to fresh air. If breathing is affected or if in all a physician.	ritation persists,			
KEEP OUT OF THE REACH OF CHILDREN.				
V Special Protection and Precautions		V Transportat	ion and Regulate	ory Data
The following recommendations are given for production facil other conditions and situations where there is increased poten accidental, large-scale, or prolonged exposure:		U.S. DOT/IMDG/IATA	•	
-lygienic Practices: Wash hands after direct contact. Do n contaminated clothing for prolonged periods.	ot wear product-	chemicals which are regulated under Section 313, and contains sodium dodecylbenzene-sulfonate (CAS # 25155-30-0) which is regulated under		
Engineering Controls: Use local exhaust to minimize exponist.	osure to product			
Personal Protective Equipment: Wear safety glasses. neoprene gloves if there is the potential for repeated or contact.	Wear rubber or prolonged skin	TSCA - All chemicals	in this product are listed or	the TSCA Inventory
VI Spill Procedures/Waste Disposal		VII Reactivity	Data	
Spill Procedures: Absorb and containerize. Wash down residence. Contact the sanitary treatment facility in advance to a process washed-down material.	dual to sanitary ssure ability to	Do not heat. Do not mix with blead organic liquids.	h containing products, alka	lis, reducing agents, or
<u>Waste Disposal</u> : Dispose of in accordance with all applicable and local regulations.	e federal, state,			
VIII Fire and Explosion Data		IX Physical D	ata	
Flashpoint (Closed Cup) =	>199 °F	pH		
Fire Extinguishing Agents: Dry chemical, carbon dioxide (CO:), foam or water			

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DATA SUPPLIED IS FOR USE ONLY IN CONNECTION WITH OCCUPATIONAL SAFETY AND HEALTH

DATE PREPARED 5/03



MATERIAL SAFETY DATA SHEET

20000 02 00

DATE OF PREPARATION Sep 9, 2008

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

20000

PRODUCT NAME

TRI-FLOW™ Superior Lubricant with PTFE

MANUFACTURER'S NAME

THE SHERWIN-WILLIAMS COMPANY

Consumer Group - Industrial

Cleveland, OH 44115

Telephone Numbers and Websites

respiration realisation and arecorded	
Regulatory information	(216) 566-2902
	www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
'for Chemical Emergency ONLY (spill, lea	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
10	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
 10	106-97-8	Butane		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
 24	64742-47-8	Heavy Aliphatic Solvent		
		ACGIH TLV	Not Available	1.53 mm
_		OSHA PEL	Not Available	
41	64742-52-5	Heavy Naphthenic Petrol	eum Oil	- 1 111
		ACGIH TLV	5 mg/m3 as Mist	
		OSHA PEL	5 mg/m3 as Mist	
2	64741-97-5	Naphthenic Oil		
	•	ACGIH TLV	5 mg/m3 as Mist	
		OSHA PEL	Not Available	
3	64742-65-0	Heavy Paraffinic Oil		
		ACGIH TLV	5 mg/m3 as Mist	
		OSHA PEL	5 mg/m3 as Mist	
 2	34590-94-8	2-Methoxymethylethoxyp	ropanol	
		ACGIH TLV	100 ppm (Skin)	0.4 mm
		ACGIH TLV	150 ppm (Skin) STEL	
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
2	628-63-7	Amyl Acetate		
		ACGIH TLV	100 PPM	4 mm
		OSHA PEL	100 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EFFECTS OF OVEREXPOSURE

INHALATION: Imitation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.









SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT

l Fl

0.6

UEL,

EXTINGUISHING MEDIA

Propellant < 0° F

14.0

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.

Application to hot surfaces requires special precautions.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.

During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.



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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT 6.50 lb/gal

778 g/l

SPECIFIC GRAVITY 0.78

BOILING POINT <0 - 500° F

<-18 - 260° C

MELTING POINT Not Available **VOLATILE VOLUME 56%**

EVAPORATION RATE Faster than ether

VAPOR DENSITY Heavier than air

SOLUBILITY IN WATER N.A.

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

Volatile Weight 48.20%

Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY - Stable **CONDITIONS TO AVOID** None known. INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZÁRDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

TOXICOLOGY DATA

CAS No.	Ingredient Name		yang mulia 1	mara digitar di terditati tribut di digitara di
74-98-6	Propane			
	•	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
106-97-8	Butane			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-47-8	Heavy Aliphatic Sol	vent		
	•	LC50 RAT	4HP	Not Available
		LD50 RAT		Not Available
64742-52-5	Heavy Naphthenic F	etroleum Oil		
	• • • • • • • • • • • • • • • • • • • •	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64741-97-5	Naphthenic Oil			
	•	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64742-65-0	Heavy Paraffinic Oil			
	•	LC50 RAT	4HP	Not Available
		LD50 RAT		Not Available
34590-94-8	2-Methoxymethyleti	noxypropanol		
		LC50 RAT	4HR	Not Available
		LD50 RAT		5135 mg/kg
628-63-7	Amyi Acetate			
	•	LC50 RAT	4HR	Not Available
		LD50 RAT		6500 mg/kg

SECTION 12— ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.



WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.



page 3 of 4



Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.

Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

SECTION 15 — REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No. CHEMICAL/CO	OMPOUND	% by WT	% Element
Barium Compo	und	2	0.06

CALIFORNIA PROPOSITION 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.



The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.



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Date of preparation: 02/25/08

SECTION I

: W. R. MEADOWS, INC.

300 Industrial Drive : Hampshire, Illinois 60140

-HMISlHealth

:01 iFlammability Reactivity : 0 Personal Protection

Telephone # Emergency #

Manufacturer

Address

: (847) 683-4500

: 1-800-424-9300 Chemtrec

(Hazard Rating: 0=Least,1=Slight,2=Moderate,3=High,4=Extreme,*=Chronic)

Product Class Mfg. code I.D. : DIVISION 3

8135000 Trade Name MEADOW-CRETE, FNP

SECTION II-A	HAZARDOUS COMPONENTS

			% by	SARA	VAPOR PRESSURE	LEL
No.	Component	CAS#	Weight	313	(mm Hg @ 20 C)	(@ 25 C)
1.	Microcrystalline Silicon Dioxide	14808-60-7	55-60	NO	N/A	N/A
2.	Portland Cement	65997-15-1	35-40	NO	N/A	N/A
3.	Calcium Oxide	1305-78-8	1-5	NO	N/A	N/A

N/A: Not Applicable Component #1 is listed by the IARC and NTP as being carcinogenic to humans (IARC Group 1). Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part

372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313".

OCCUPATIONAL EXPOSURE LIMITS SECTION II-B

~_				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
_		OSHA			ACGI	i		
No.	PEL/TWA	PEL/CEILING	PEL/STEL	SKIN	TLV/TWA_TLV/CEILING	TLV/STEL	SKIN	
1.	+	N/E	N/E	N/E	0.025 mg/m³ N/E	N/E	N/E	
2.	15 mg/m³*	N/E	N/E	N/E	10 mg/m² N/E	N/E	N/E	
3.	5 mg/m³	N/E	N/E	N/E	5 mg/m³ N/E	N/E	N/E	
N/E	Not establishe	ed * = Respirable	Fraction (Nui	sance Dust)	+ = 10 mg/m³ / (%SiO2+2)			

SECTION III

PHYSICAL DATA

Boiling Point: Evaporation Rate: Vapor Density:

Not established Not applicable Not applicable Not applicable

% Volatile by volume : % Volatile by weight : Weight per gallon:

Product Appearance:

Not applicable Not applicable 23.0 (Theoretical) Grey Powder

SECTION IV

pH Level:

HEALTH INFORMATION

EYE CONTACT: This material may cause mild to moderate eye irritation. Prolonged contact may cause damage to the eyes.

SKIN CONTACT: Exposure may cause mild to moderate skin imitation. Prolonged or repeated contact may cause redness, burning, drying, and cracking of the skin. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

INHALATION: Exposure may produce irritation to the nose, throat, respiratory tract, and other mucous membranes. Based on the presence of component 1 inhalation of Silica dust may cause lung disease (silicosis).

INGESTION: This product may cause mild to moderate imitation of the gastrointestinal tract.

SIGNS AND SYMPTOMS: Symptoms of eye irritation include pain, tearing, reddening, and swelling. Symptoms of skin irritation include reddening, swelling, rash, and redness. Symptoms of respiratory imitation include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Symptoms of gastrointestinal imitation include sore throat, abdominal pain, nausea, vomiting, and diarrhea.

AGGRAVATED MEDICAL CONDITIONS: Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product. OTHER HEALTH EFFECTS: None recognized.

SECTION V

EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with water for at least fifteen (15) minutes. Seek medical attention if symptoms persist.

SKIN CONTACT: Remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water. If imitation or redness develops and persists, seek medical attention.

INHALATION: Remove victim to fresh air and treat symptomatically. Provide oxygen if breathing is difficult. Give artificial respiration if the victim is not breathing. Seek prompt medical attention.

INGESTION: Dilute with liquid unless the victim is unconscious or very drowsy. If vomiting spontaneously occurs, keep the victim's head below the hips to prevent aspiration into the lungs. Consult a physician, hospital, or poison control center and/or transport to an emergency facility immediately.

Date of preparation: 02/25/08 MEADOW-CRETE FNP

8135000 Page 1

Date of preparation: 02/25/08

SECTION VI

FIRE AND EXPLOSION HAZARDS

FLAMMABILITY CLASSIFICATION

- NFPA : None - DOT : Not regulated

FLASH POINT: Product will not flash.

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical, or Carbon Dioxide.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: Material will not burn. Avoid breathing dust if bags are damaged.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None recognized.

SECTION VII

REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS AND MATERIALS TO AVOID: None recognized.

HAZARDOUS DECOMPOSITION PRODUCTS: None known. Avoid breathing dust.

SECTION VIII

EMPLOYEE PROTECTION

RESPIRATORY PROTECTION: Use ventilation as required to control dust concentrations - at least 10 air changes per hour are recommended for good general room ventilation. If exposure exceeds the PEL/TLV, use the appropriate NIOSH approved dust mask.

PROTECTIVE CLOTHING: Wear safety glasses to prevent eye contact. Contact lenses should not be worn. Wear appropriate gloves and protective

clothing to prevent contact with skin and clothing.

ADDITIONAL PROTECTIVE MEASURES: Eye wash fountains and safety showers should be available for use in an emergency.

SECTION IX

ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURES: LARGE SPILLS>> Evacuate the hazard area of unprotected personnel. Wear appropriate dust mask and protective clothing. Avoid inhaling dust. Place in non-leaking containers for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above. SMALL SPILLS>> Pick up loose material and place in non-leaking containers; seal tightly for proper disposal.

WASTE DISPOSAL: Observe all Federal, State and local regulations regarding proper disposal.

SECTION X

ADDITIONAL PRECAUTIONS

Containers can contain hazardous product residues even when empty. Wash with soap and water before eating, drinking, smoking or using toilet facilities.



The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injury from the use of the product described herein.

Date of preparation: 02/25/08 MEADOW-CRETE FNP

8135000 Page 2





CLEANING SYSTEMS



READY TO USE Glass & Hard Surface Gleaner

Description:

BRITE KLEAN is a glass and hard surface cleaner. It is an efficient, non-streaking, versatile cleaner especially for windows, windshields, mirrors, chrome, stainless steel, and counter tops.

BRITE KLEAN can be used for many quick clean-up jobs. GREAT as a carpet spotter or upholstery spot remover. It quickly cleans walls, vinyl wallpaper, and is excellent for cleaning up spills on the floor. Use **BRITE KLEAN** anywhere you want to spray and wipe clean.



Use Directions:

WINDOWS:

- 1. Spray directly onto surface using a trigger sprayer. Hold sprayer tip 8 12 inches from the surface.
- 2. Allow solution to penetrate soil.
- 3. Wipe dry with a soft dean.

SPOT REMOVER:

BRITE KLEAN can be used as a ready-to-use general spotter for removing normal spots on rugs, carpets and upholstery. May be used as a prespotter before shampooing. Apply **BRITE KLEAN** to spot and brush it in. Blot or wipe with an absorbent cotton cloth or towel.

Available Packages:

- √ 4x1 Gallon Case
- √ 12x1 Quart Case

TECHNICAL DATA

Color: Pink

Specific Gravity: 0.98

Density: 8.2 lbs/gal

pH: 10.0

Viscosity: Non-Viscous Stability: I Year Min.

Phosphates: None

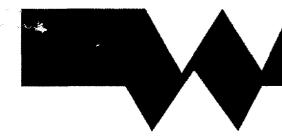
Freeze/Thaw Stable: 3 Cycles Min.

Ammonia: None



Walter E. Nelson Co. Corporate Portland, OR 97217 (503) 285-3037 Coastal Paper & Supply North Bend, OR 97459 (541) 756-6770 Crown Paper & Janitorial Supply Walla Walla, WA 99362 (509) 529-4561 Walter E. Nelson Seattle Branch Kirkland, WA 98034 (425) 814-2665

Walter E. Nelson Eugene Branch Eugene, OR 97402 (541) 344-0651 Astoria Janitor & Paper Supply Co. Astoria, OR 97103 (503) 325-6362 Barco Supply Klamath Falls, OR 97601 (541) 884-9064 - (800) 642-2571 Juniper Paper & Supply Bend, OR 97702 (541) 312-4070 Walter E. Nelson Spokane Branch Spokane, WA 99202 (509) 755-0870



WALTER E. NELSON CO.

MATERIAL SAFETY DATA SHEET

BRITE KLEAN RTU Glass & Hard Surface Cleaner

		Date	e Prepared:	09-01-01 By	Charles D. Werner
SECTION 1 - PRODUCT IDENTIFICATION					
Distributor Name: Walter E. Nelson, Co.		Emergency Pl	one No: 1-800	-228-5635 ext.	059
Address: 5937 N. CUTTER CIRCLE, PORTLAND OR 97217		**····································			
Trade Name: BRITE KLEEN		Product Type:	Ready-	To-Use Glass	Cleaner
Product code: FLAGCSPX		Formula:			
SECTION 2 - HAZARDOUS INGREDIENTS				-	Market and the second s
Chemical Name/Common Name:		CAS NO.	PERCENT	EVENCIE	RE LIMIT (Source)
Isopropyl alcohol LC ₂₀ 22,600 PPM INH (rat), LD ₂₀ (oral-rat) 5,045 mg/	kor	67-63-0	5 - 10		PEL(OSHA)
150propyra(conor 12.36 22,000 PPM INTI (rat), 1.156 (otar-rat) 5,045 ing	<u> </u>	07-03-0	1 3-10	400 FFW I	(LL(OSIDA)
No toxic chemicals subject to the reporting requirements of s	ection 313	of Title III and o	£40 CFR 372 :	re present	
SECTION 3 - PHYSICAL DATA	CERNI 313		1 40 011(372)	ire present	
Boiling Point: (F) 212		Gravity: (H2O =		pH: 8.0 -	8.5
Vapor Pressure: (mm/Hg): Heavier than air	Vapor De	ensity: (AIR =	1.0: 2.1		
Solubility In Water: Complete	.,				
Evaporation Rate (Vs BUTYL ACETATE = 1.0): greater than 1.0					······································
Appearance and Odor: Liquid, non-viscous, PINK color and MILD fragrand					
SECTION 4 - FIRE AND EXPLOSION HAZARD DA	TA				
Flash Point (T.C.C.): 115-120 100 F FLAMMABLE LIMITS / % VOLUM	E IN AIR:	UPPER: 2,	LOWE	R 12.7%	
Extinguishing Media: Use water fog, "alcohol" Foam, Dry Chemical or CO2.					
Special Fire Fighting Procedures: Clear area of unprotected personnel. Do not enter	confined fir	e space without	full bunker gea	r, including a p	positive pressure
NIOSH approved self-contained breathing apparatus. Cool fire exposed containers.					
Unusual Fire and Explosion Hazards: Containers exposed to intense heat from fires si	hould be co	oled with water t	to prevent vapor	r pressure build	dup, which could
result in container rupture.					
SECTION 5 - REACTIVE DATA					,
Stability: Stable Incompatibility: Non-reacti					
Hazardous Decomposition Products: Carbon monoxide and unidentified organic comp	ounds may	be formed durin	g combustion.		
SECTION 6 - HEALTH HAZARDS					
Threshold Limit Value - Product (See Section 2 for Ingredient TLV) None Esta	iblished				
Primary Routes of Exposure: Eye - yes Skin-No Oral-yes		Inhalation-yes		Other	
Signs and Symptoms of Over-exposure (Acute): EYES: Contact with concentrate will irritate the					
May cause mild irritation to the nose, throat and respiratory tract and may result in central nervou oral toxicity. Irritation as noted above, early to moderate CNS depression may be evidenced by g				onsidered to have	e a low order of acute
Symptoms of Over-Exposure (Chronic): unknown	idumicas, nea	daciic, dizziness, a	ии и по		
Medical Conditions Aggravated by Over-exposure: Persons with pre-existing skin disorders, impa	aired respirat	ory function may n	nore Susceptible t	o effects.	
Carcinogen or Suspect Carcinogen Ingredients: NTP - NO IARC - N		OSHA - NO	NONE		
SECTION 7 - EMERGENCY AND FIRST AID PRO	CEDUR	ES			
Eyes: Plush with immediately with lots of running water for at least 15 minutes holding cyclids o	pen. Get me	dical attention.			
Skin: Flush skin with water. Remove contaminated clothing & shoes. Wash before reuse.					
Ingestion: DO NOT INDUCE VOMITING. If vomiting occurs spontaucously, keep victim's	head below h	is hips to prevent l	his breathing vom	itus into his lung	s. Call physician or
poison control center immediately, treat symptomatically. Do not give anything by mouth to an u	nconscious of	convulsing person	<u>1</u>		
Inhalation: Get to fresh air. Get medical attention if breathing is difficult.					
SECTION 8 - SPECIAL PROTECTION INFORMAT	ION				
Respiratory Protection: not normally required Ventilation Requirements:	Adequate	ventitation required	l <u></u>		
Protective Gloves: not normally required, to be used to minimize contact. Eye Prote	ction: Not bo	rmally required. I	Recommended if t	used overhead or	misting or spraying.
SECTION 9 - SPILL OR LEAK PROCEDURES					
Steps to be Taken if Released or Spilled: WARNING COMBUSTIBLE - For small spills, mop comain.					
Waste Disposal Methods: Note that the contaminates of the product must be consider when dispo	sing . Consu	It appropriate Fede	eral, State and Lo	cal regulatory ag	encies to ascertain

Precautions to be Taken in Handling and Storage: COMBUSTIBLE -- KEEP AWAY FROM HEAT AND FLAME. Do not mix chemicals. Keep container tightly closed when not in



proper disposal procedures and comply with them.

SECTION 10 - STORAGE AND HANDLING INFORMATION

WALTER E. NELSON COMPANY

WENCOBrand

CLEANING SYSTEMS

CHOUTECOO

Description:

More effective than butyl based degreasers, **GET OUT 5000** is formulated with the finest grade d-Limonene and wetting agents to effectively emulsify grease, grime etc. It is a natural replacement for butyl based products in industrial and institutional heavy duty cleaning. It contains no petroleum solvents and is safe to use everyday, everywhere. **GET OUT 5000** is biodegradable and phosphate free.



Use Directions:

Heavy Soil 1:8 = 16 oz per gallon of water Degreasing motors, shop floors

Medium Soil 1:16 = 8 oz per gallon of water Bathrooms, kitchen appliances, wall, whitewall tires, lockers

Light Soil 1:32 = 4 oz per gallon of water Walls (finger prints, smudges) counter tops, cabinets

Daily Cleaning 3 -6 oz. per gallon of water all purpose cleaning solution

Available Packages:

- √ 4x1 Gallon Case
- √ 5 Gallon Pails
- √ 55 Gallon Drums

TECHNICAL DATA

Active Solvents: d-limonene

Propylene Series

Glycol Ether

Color: Yellow

Fragrance: Citrus Orange

Specific Gravity: 1.013

Density: 8.43 lbs/gal

pH: 7.0 - 10.0

Viscosity: Thin Phosphates: None



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Keep container tightly closed when not in use.

WALTER E. NELSON CO. MATERIAL SAFETY DATA SHEET

GET OUT 5000

Citrus Based Cleaner & Degreaser

SECTION 1 - PRODUCT IDENTIFICATION		Date Prepared: 09	-01-01 By Charles D. W
Distributor Name: WALTER E. NELSON CO.	Emarganov Pho	ne No: 1-800-228-5635 ex	· 050
Address: 5937 N. CUTTER CIRCLE, PORTLAND OR 9721'		ie No. 1-800-226-3033 CX	1. 039
Trade Name: GET OUT 5000	Product Type/us	e Citrus Based Cleane	r & Degresser
Product Code: FLCSTIYO	Formula:	C Chris Daned Cicare	I & Degrosser
SECTION 2 - HAZARDOUS INGREDIENTS			
Chemical Name/Common Name:	CAS NO.	PERCENT (optional)	TLV/PEL
D-Limonene	5989-27-5	5 - 10	N/A
Sodium Xylene Sulfonate LD50 (oral-rat) 4220 mg/kg	1300-72-7	5 - 10	NE
Dipropylene Glycol Monomethyl Ether	34590-94-8	5 - 10	100 PPM (ACGIH)
Anionic/ nonionic Surfactant Blend LDso (oral-rat) > 5000 mg/kg		5 - 10	NE
No chemicals subject to the reporting requirements of section 31	3 of title III and of 40 CFR 372 are pre	sent.	
SECTION 3 - PHYSICAL DATA			
Boiling Point: (F) 212 (100 C): Freezing Point 32 F (0 C)	Specific Gravity	(H2O = 1.0): 1.013	pH: 7.0 - 8.0
Vapor Pressure: (mm/Hg: Not Determined	Vapor Density:		
	oefficient of water/oil: Not available		
Evaporation Rate (Vs ether) Slower	Constitute of Wilderest. 1100 artifactor		
Appearance and Odor: Liquid, non-viscous, YELLOW color and	pleasant fragrance Odor The	eshold: Not available	
SECTION 4 - FIRE AND EXPLOSION HAZA			
	RD DATA		
Flash Point (T.C.C.): NONE			
	ial procedures required.		
pecial Fire Fighting Procedures: none required.			
Juusual Fire and Explosion Hazards: NOTHING SPECIAL.			and the second s
SECTION 5 - REACTIVE DATA			
Stability: Stable Incompatibility: Ox	idizers		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Hazardous Decomposition Products: none			
SECTION 6 - HEALTH HAZARDS			
Threshold Limit Value - Product (See Section 2 for Ingredient TLV/PEL)) None Established		
Primary Routes of Exposure: Eye - yes Skin-YES		lation-yes	Other
Signs and Symptoms of Over-exposure (Acute): EYES: Vapors and mis			
headaches. SKIN: No irritation is likely after brief contact but may be irrita-	ating after prolonged contact. INGEST	ION: Swallowing the liqu	id may cause abdominal
pain, nausea, or vomiting.			
Chronic Health Hazards: No specific information available.			
	to the second and the second and the second and the second	C	
Carcinogen or Suspect Carcinogen Ingredients: NTP - NO	IARC - NO OSE	ry function may more sus IA - NO	ceptible to effects. NONE
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